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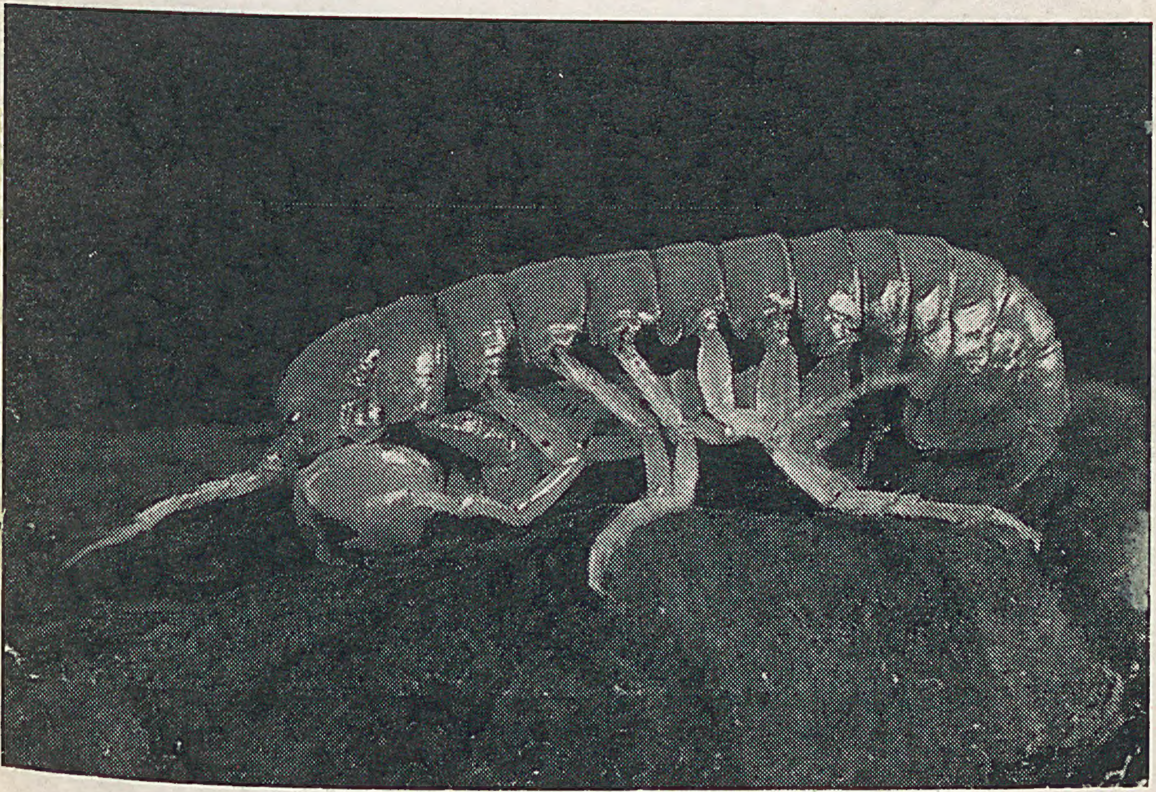

PHREATOICOPSIS

Hon. Editor: Trevor Pescott

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

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COVER PHOTOGRAPH:

Phreatoicopsis from the Grampians
by Ian McCann.

GEELONG NATURALIST

Vol.5. No.1. April 1968.

EDITORIAL

In the "Junior Pages" of this issue is a sketch of a honeyeater feeder suitable for installation in any suburban garden; I hope that many will be built, for now is an ideal time to assist feeding of these nomadic birds.

Next to my home are several Tuart gums now in flower, and these provide a source of food for a swarm of Honeyeaters and some Lorikeets; most of these are nomads that follow the flow of honey, and in times of drought suffer along with most other wildlife. Feeding assistance for birds, and a source of water, is always welcome, and the reward for a little work in building a feeder and keeping it and the water bowl filled is to have the garden alive with our most vivaceous group of birds, the honeyeaters.

Although drought causes extreme hardship for individual birds and animals, nature has a way of balancing - given, of course, there are reserves left to form a basic stock. Probably no species is seriously endangered as a whole by drought, but we must have sufficient habitat remaining for the birds and animals to survive. The drought will not cause extermination of a species in itself - but man's carelessness in destroying habitat, his wanton destruction of vegetation, swamp and land, too often leaves insufficient area of suitable habitat for birds and animals to recover from any serious disaster, be it fire, drought, or disease.

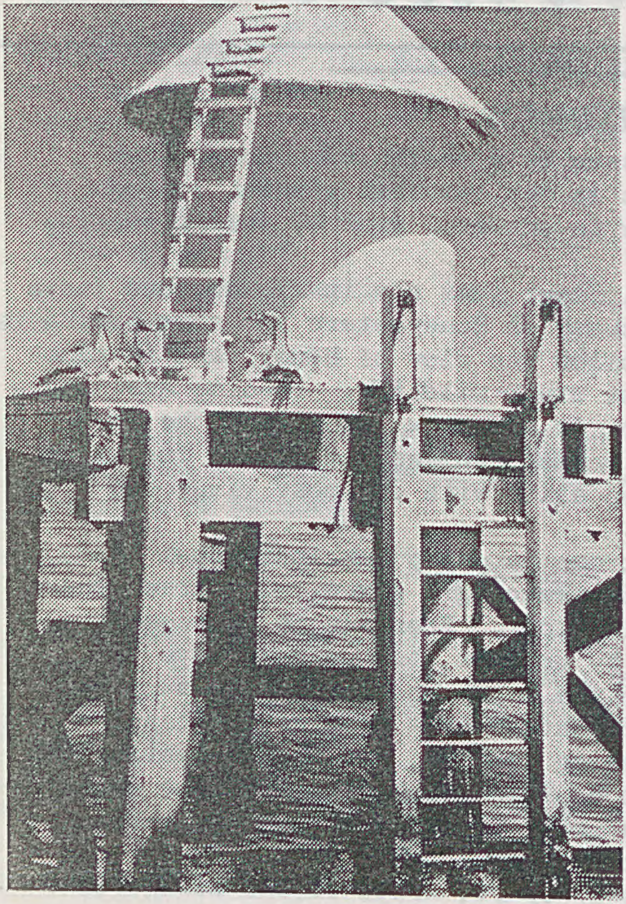
Mr Wheeler in his President's Report, wrote of the Lowans or Mallee Fowl at Kiata starving; the problem is that the 700acres reserve is too small for a bird of this type - the drought reduces food and water available, but it is man's failure to provide sufficient area for the birds to wander at this time that is producing the hardships. On many occasions, we plead for areas of land to be preserved as habitat, but the ultimate decision is often beyond our control. In a small way, however, we can do a little by building water and feeding places for our nomadic bush birds; they have an advantage over the Mallee fowl by having air space in which to move - but no matter how far they move, they still must reach a destination where food exists.

Could this be your garden?

TREVOR PESCOTT,
Hon. Editor.

BOOBIES FOUND BREEDING IN PORT PHILLIP BAY

By Jack Wheeler, Belmont



Pile Light in West Channel.
Photo by Jack Wheeler.

"Gannets known as boobies to sailors, occur on most of the high seas. They are powerful fliers and expert divers. To breed, they prefer seclusion on remote islands, many of which are mostly inaccessible. Strange as it may seem, a small group of boobies have now broken this tradition by establishing a breeding colony on a pile-light close to habitation and in the heart of a busy shipping channel."

Less than two years ago, late in 1966, Ned Stonehouse, on the staff of the Ports and Harbours at Queenscliff, reported that a handful of Australian gannets had nested on the wooden platform of a channel pile-light. His letter to a prominent naturalist was ignored. Later, Ned contacted me, and I promptly discussed this strange behaviour with him. I learnt that three nests had been noticed but only one chick had been successfully reared. It was early in December 1966, that the first and only egg was laid.

During his tour of duty in servicing the channel lights, Ned watched with interest, particularly the arrival of the first chick which is probably the first gannet ever hatched in Port Phillip Bay. After a few weeks, the chick grew into a healthy and robust bird, living on a diet of pilchard and squid. By mid-February, the youngster had become fully-fledged and was master of the air, just as its older parents.

BOOBIES FOUND BREEDING IN PORT PHILLIP BAY (Cont'd.)

I discussed this with other naturalists, and some even doubted the observation, and passed it off as being a cormorant, but definitely not a gannet. Ned had spent much of his life at sea, particularly around the many islands of Tasmania, and apart from knowing these golden-headed birds, had seen many hundreds of them nesting on the Black Pyramid off Stanley, in Bass Strait.

I felt sure that Ned had not made any mistake, so we waited for the nest season with considerable interest - would this handful of gannets repeat their breeding routine of 1966? Ned felt confident that they would, as during the winter when on his rounds, they were always in the vicinity of this particular light. Sure enough, on 23rd August of 1967, fresh dry sea-weed was noticed on the platform, and odd birds noted carrying nesting material.

Ned Stonehouse & Geoff Vincent examining a young gannet.
Photo. by Jack Wheeler.

On 14th September, there were two nests roughly put together with masses of sea-weed and guano, and one contained what appeared to be quite a fresh egg. By late in November the nests had increased to six and the first chick had hatched. I was not able to visit this rookery until 8th January. It was a perfect day, with a calm sea. I wanted to confirm Ned's discovery and I wanted to land on

BOOBIES FOUND BREEDING IN PORT PHILLIP BAY (Cont'd.)

the pile-light to photograph the young and also to band them. To assist with the banding, Geoff Vincent accompanied me.

Approaching the pile, I counted eleven adults, all in breeding plumage, their rich golden heads adding to their beauty and giving them that elegant appearance. We circled the light before coming in to land and it was not until then that the adults took off, and we could then clearly see the chicks herded close to the base of the light structure. The wooden platform constructed on tall piles, measured about 25' by 15'. In all there were ten nests. Four contained single eggs, one a very freshly hatched chick, and two, downey chicks. One downey chick had left the nest and another was close reaching the fully fledged state. Four chicks were banded. My second visit was made on the 14th February, when three further chicks were banded, and one nest contained a single egg still being incubated. Little remained of the other nests which were there on the previous visit.

To our knowledge, seven young were reared this season. Now we are anxiously waiting to see what will happen in future seasons. At the most this platform could only take twenty five nests. What will happen when this state is reached. Already birds have been noticed depositing sea-weed material on another pile-light, as if for breeding.

Perhaps in a matter of a few years, we will have a series of gannet rookeries along our various shipping lanes in Port Phillip Bay- who knows?

We are extremely grateful to Ned Stonehouse for his interest in these gannets and also to the Ports and Harbours for arranging transport.

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Editor's note: Those fortunate enough to be present on the Bird Observers Club boat trip on March 24th saw the nesting sight, with one large young still present.

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PHREATOICOPSIS - THE WHITE SHRIMP OF THE GRAMPIANS

By Ian McCann, Stawell

There are far more interesting and remarkable things on Mount William in the Grampians than the tall pylons and other structures of the Department of Civil Aviation.

Many of the trees and shrubs and some of the herbs to be found in the shallow gullies and rock crevices on this great rounded mass of sandstone are endemic species; they do not occur naturally anywhere in the world outside the Grampians region.

Some of the stunted eucalypts are Grampians Gums which are restricted to this region. Early each Summer the sturdy shrubs bud and bloom. Then may be seen masses of colorful flowers, the rich mauve of the Rosy Bush-pea, the bright yellow of the Mountain Parrot-pea, and the creamy white of a long-leaved Beard-heath. All are endemics. The small, pincushion-like rosettes of the Bristly Trigger-plant are common and will produce their quaint flowers with sensitive columns around Christmas. This too is confined to the Grampians.

Sometimes, especially after heavy rain-storms, the skeletons of a strange, leggy crustacean may be found. This is the creature known as Phreatoicopsis terricola. (Phreatoicopsis is pronounced "free-a-toe-i-copsis".) It has been called by one writer "the White Shrimp", but it is not a shrimp. Its nearest relatives are the "slaters" and "pill bugs" which we find in our gardens.

Phreatoicopsis terricola is the largest of the phreatoicids growing to a length of about two inches. It is usually light grey to white with some yellow on the front of the head and on the edges of the body segments. It has a pair of feelers, a pair of poorly developed eyes, and seven pairs of walking legs. The legs of the first pair are the largest and their last segment consists of a movable claw which can be folded back on to the next segment which is greatly enlarged. The rearmost three pairs of legs are opposed to the others. The abdomen or tail looks something like that of a yabbie but is rounder in cross section. Like the yabbie it flaps this tail vigorously when disturbed.

PHREATOICOPSIS - THE WHITE SHRIMP OF THE GRAMPIANS (Cont'd.)

It is an extrmely awkward creature. It cannot swim and, when it crawls, spends most of the time falling over and righting itself.

Terricola, its specific name, means "living in the ground" and this describes its habits very well although it has been found in streams also. On the mountains it favours shallow tunnels which it excavates under rocks and in moss beds; but in the valleys it occupies "crab holes" which may be several feet deep. My experience is that it can survive quite well without water. I have found it in dry moss, and under rocks in soil that was almost dry.

Phreatoicopsis is confined to the Grampians and parts of the Otways. Two other Grampians crustaceans also have extremely restricted distributions. The Spiny Crayfish which occurs in the Wannon and Glenelg rivers is not found away from this river system, and a steel-blue to brown "yabbie", on which the movable claw of the pincer is sickle-shaped, is also confined to streams which rise in the Grampians.

Phreatoicopsis is of interest for yet another reason. Fossils of an almost identical species have been found in the Triassic beds in New South Wales. To remain practically unchanged in this changing world for 175,000,000 years is no mean achievement. It was digging its tunnels and flapping about in the streams about the time that a branch of the reptile stock began to develop the characteristics which resulted in the evolution of the now dominant mammals. It existed for millions of years before there were any birds or flowering plants.

Phreatoicopsis was well over 170 million years old before ancestral man fashioned his first tool and crouched over his first camp fire.

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Articles and photographs are always needed by the Hon. Editor to fill future issues of "Geelong Naturalist".

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NOTES ON THE GRAMPIAN'S FLORA - PART 2

By Alan Lonsdale & Geoff Carr

Phebalium bilobum, Mt. William.
Photo by Alan Lonsdale.

WONDERLAND.

The name Wonderland is by no means a misnomer as members found when they visited the area on Saturday afternoon. Botanically it was the most interesting place we visited and is the equal of any in the Grampians for variety of plants, landscape and rock formations. We could have spent much more time in the locality.

The lookout at the top of Wonderland known as The Pinnacle is reached from the car park by means of a tourist track which is well posted with the names of various landmarks and provided with iron steps and railing to make the going easier. This track is constantly interesting and varied and keeps the company of ravines, canyons, caves and a waterfall which had by this stage ceased to flow. At the Pinnacle a magnificent view is obtained of the various ranges and peaks to the north, south, east and west with Lake

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Bellfield and Hall's Gap almost below the viewer's feet.

Just beyond the car park the track bridges the very picturesque Rocky Creek and then follows up a ravine through which a small stream runs. In this vicinity many beautiful and interesting plants were noted.

Astroloma pinifolium, Pine Heath is a sprawling shrub with light green "needle" leaves and slender yellow and green tubular flowers. The edible fruits are relished by emus. It is worthy of admiration by virtue of its foliage alone and is common in the Grampians.

Caladenia carnea, Pink Fingers is a well known orchid of which a few specimens were seen along the track.

Calytrix sullivanii, Grampians Fringe-myrtle. This endemic plant is named after an energetic plant collector who did much work in the Grampians. The masses of white to pale pink flowers provide colour over a wide area and are one of the beauties of the Grampians.

Cladia retipora, Coral Lichen. Some members found specimens of this common but beautiful lichen under shrubs about half way along the track.

Comesperma volubile, Love Creeper. Few climbers have the charm of this plant which was noted along the track in several places. The small flowers are massed along slender stems and are blue.

Correa aemula, Hairy Correa is a common plant in the Grampians where it is at its best along the streams. The attractive hairy leaves are oval shaped and the translucent green bell flowers are often marked with purple. It is confined in Victoria to the south west.

Dillwynia oreadoxa, Parrot-pea is an endemic species with large clear golden flowers in clusters. It was flowering well along much of the track.

Eucalyptus alpina, Grampians Gum. As the common name suggests, this tree is found nowhere else and it was first discovered by Major

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Mitchell on Mt. William. It is only found in the higher parts of the ranges and on the very summits only attains a dwarf stature. Some specimens were in flower, an occurence which is seldom observed because of the plant's irregularity in blooming. The flowers are white.

Euphrasia collina, Purple Eyebright is a low perennial which grows in sheltered spots. We observed a number of specimens in the higher parts in the protection of rock. The beautiful mauve white and yellow flowers are borne along the erect stems. The genus is said to be parasitic on the roots of other plants.

Gahnia clarkei, Giant Saw-sedge. This massive plant grows up to fifteen feet and has claim to fame as being the largest sedge in the world. It is an impressive plant and can be seen to advantage along the streams of Wonderland and wherever else there is an abundance of moisture.

Hakea sericea, Silky Hakea. In bloom the Silky Hakea is a beautiful plant and it is now quite common in gardens. The species is common in the lower part of Wonderland where it was flowering well. The leaves are slender, rigid and needle sharp.

Helichrysum baxteri, White Everlasting is one of several white everlastings which make a show in the Grampians. This species is a low perennial which is common on lighter soils.

Humea elegans, Plume Humea. This is a huge biennial attaining a height of up to fifteen feet which bears large plumes of red or bronzy pendant heads in summer. We incidentally have not seen the plant in bloom but several small specimens were seen in the ravine near the start of the track. The foliage is large and luxuriant looking and pleasantly aromatic. It is a member of the daisy family and has recently been given an entirely new name. "Humea" is now obsolete for this plant.

Leptospermum nitidum, Shining Tea-tree. Probably no tea-tree has larger flowers than this handsome species which is found in the Grampians and Tasmania. The deep green shiny foliage is reddish when young and the flowers are pure white and produced in abundance.

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

It can be seen in most parts of the Grampians clinging often in the highest and most exposed situations where existence seems impossible.

Marianthus bignoniaceus, Orange Bell-climber. The only Victorian occurrence of this beautiful climber is the Grampians but it is also found in South Australia. It is a common plant, mainly along streams where it often becomes very dense. The plants we saw along the track were flowering well, the dainty orange bells hanging along the tough stems.

Pimelea spathulata, Nodding Rice-flower. In the vicinity of the waterfall this small shrub was flowering abundantly, and it was conspicuous along the track by its clusters of pendant creamy flowers.

Pultenaea scabra and Pultenaea costata. The Rough and Ribbed Bush-peas respectively. The latter species is endemic. These shrubs provided much colour along the middle part of the track. Both species have yellow and orange flowers in profusion.

Stylidium solobiferum, Grampians or Bristly Trigger-plant. As the common name implies this small plant is found nowhere else. The plants consist of colonies of dense many leaved rosettes. Each leaf is narrow and fleshy (to withstand the summer drought) and ends in a fine bristle. On the Major Mitchell Plateau these plants carpet many square yards. The small white, crimson backed flowers are borne on branched slender stems and each possess the usual trigger mechanism. The plants grow often in soaks which dry out in summer. It was in good flower when we saw it. The plant is unique because it is the only eastern representative of the essentially western group of rosetted trigger plants.

Thelymitra antennifera, Rabbit Ears is a beautiful clear yellow orchid which expands only in warm sun. We saw a few specimens in the soaks along the track. Another species, the

Salmon Sun-orchid , T. rubra which has smaller pink flowers was also noted. In similar situation (the soaks) the rare yellow form of the Salmon Sun-orchid can be found, though none were evident this time.

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Todea barbata, King Fern. This is another huge plant of the water courses and good specimens can be seen in the first ravine where the plants were named. The fronds of this magnificent fern can be as much as ten feet long, but the trunk is only short.

Utricularia dichotoma, Fairies' Aprons. The bladder-worts are very interesting aquatic herbs which are noted for their "animalcule" catching ability. Small water organisms are caught in tiny traps on the roots of the plant. The rosette of leaves is very small and is often submerged, and from this rises a slender stem about six inches high bearing several mauve flowers with a large apron. Each apron has a yellow dot in the centre. Occasionally pure white flowers are found and in a good season the Fairies' Aprons grace the Grampians soaks in thousands.

We found the species on the margins of Rocky Creek and higher up towards the Pinnacle where they occupy the mossy slopes which run with water in winter and spring.

WONDERLAND - PLANT LIST:

Acacia mitchellii	Mitchell Wattle
Acacia mucronata	Variable Swallow-wattle
Acacia myrtifolia	Myrtle Wattle
Acacia oxycedrus	Spike Wattle
Acrotriche serrulata	Honey-pots
Asplenium flabellifolium	Necklace Fern
Astroloma pinifolium	Pine Heath
Banksia marginata	Silver Banksia
Billardiera scandens	Common Apple-berry
Bulbine bulbosa	Bulbine Lily
Burchardia Umbellata	Milkmaids
Calytrix sullivanii	Grampians Fringe-myrtle
Cladia retipora	Coral Lichen
Comesperma volubile	Love Creeper
Correa aemula	Hairy Correa
Dianella revoluta	Black-anther Flax-lily
Dichopogon strictus	Chocolate Lily
Dillwynia oreodoxa	Parrot-pea
Dodonea cuneata	Giant Hop Bush

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Eucalyptus alpina	Grampians Gum
Euphrasia collina	Purple Eyebright
Gahnia clarkei	Giant Saw-sedge
Goodenia geniculata	Bent Goodenia
Goodenia ovata	Hop Goodenia
Grevillea aquifolium	Prickly Grevillea
Hakea rostrata	Beaked Hakea
Hakea sericea	Silky Hakea
Helichrysum baxteri	White Everlasting
Helichrysum obcordatum	Grey Everlasting
Hovea heterophylla	Common Hovea
Humea elegans	Plume Humea
Leptospermum juniperinum	Manuka
Leptospermum nitidum	Shining Tea-tree
Leucopogon thymifolius	Thyme Beard-heath
Marianthus bignoniaceus	Orange Bell-climber
Melaleuca decussata	Totem-poles
Melaleuca squarrosa	Scented Paper-bark
Olearia ramulosa	Twiggy Daisy-bush
Persoonia juniperina	Prickly Geebung
Phebalium bilobum	Truncate Phebalium
Pimelia spathulata	Nodding Rice-flower
Prostanthera lasianthos	Christmas Bush
Pultenaea angustifolia	Narrow-leaf Bush-pea
Pultenaea costata	Ribbed Bush-pea
Pultengea scabra	Rough Bush-pea
Stackhousia viminea	Slender Stackhousia
Stylidium solabiferum	Bristly Trigger-plant
Stypandra glauca	Nodding Blue-lily
Styphelia adscendens	Golden Heath
Tetratheca ciliata	Black Eyed Susan
Todea barbata	King Fern
Utricularia dichotoma	Fairies' Aprons
Veronica gracilis	Slender Speedwell

Caladenia angustata	Musky Caladenia
Caladenia carnea	Pink Fingers
Pterostylis longifolia	Tall Greenhood
Pterostylis parviflora	Tiny Greenhood

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Thelymitra antennifera	Rabbit Ears
Thelymitra aristata	Scented Sun-orchid
Thelymitra pauciflora	Common Sun-orchid
Thelymitra rubra	Salmon Sun-orchid

VICTORIA VALLEY.

On Sunday morning a few of the more enthusiastic members indulged in a before breakfast jaunt to the Victoria Valley to inspect an area known to contain the Purple Diuris, Diuris punctata.

This orchid has a special attraction because of its colour and size, and is recognised as being one of the largest and finest orchids we have. It is now quite rare.

A week earlier the orchids had not been out but plenty of buds were evident. Our later inspection proved worthwhile, nearly all buds being open, though the blooms were considerably poorer than the previous year because of the dryness. We saw only one pool of water aside from a man made channel, whereas last year the whole of the Victoria Valley seemed unindated, there being surface water everywhere.

Other orchids seen included the Musky Caladenia, Caladenia angustata which is a particularly fine form here. The petals and sepals are often backed with a deep purple-maroon colour the likes of which we have not seen elsewhere. This colour often extends onto the upper surface of the floral segments, making the flower considerably more attractive. It is plentiful here as is the Rabbit Ears, Thelymitra antennifera, and the Common Sun-orchid, T. pauciflora. Onion orchids are also numerous. A week earlier we had observed the pollenation of the Common Sun-orchid by a small native bee.

Other plants of note in the Victoria Valley were Bulbine bulbosa the Bulbine Lily which spreads veneers of yellow under the Red Gums in the more open places, and the pink Grass Trigger-plant, Stylidium graminifolium. Also the beautiful mauve-purple Kunzea, K. paruifolia was seen in full bloom and a very large specimen of the Yellow Hakea, H. nodosa, which is not often observed.

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Podolepsis jaceoides the Showy Podolepsis made a fine show with its yellow-fringed heads.

The whole journey to and from the Victoria Valley was a procession of colour as plants lined the road; pea flowers were particularly evident. Each creek crossing was illuminated with Showy Bauera, B. sessiliflora, and Silky Tea-tree was everywhere conspicuous.

Common Heath, Mt. William.
Photo by Alan Lonsdale.

MT. WILLIAM.

At 3,829 feet Mt. William is the highest and also one of the most easterly points in the Grampians becoming sub-alpine on the summit where snow in winter is not rare.

In discovering the Grampians Major Mitchell did little to investigate the ranges themselves and only climbed several peaks including the

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

then unnamed Mt. William which impressed him as a point of observation. He ascended Mt. William with a handful of men and spent a night and the best part of the next day there in extremely adverse conditions. So cold and windy was it that the air was full of sleet in the night and the bushes were covered with icicles. The temperature was as low as 27°F at one stage and several of his men became ill through the effects of exposure which left them debilitated for the remainder of the expedition.

Major Mitchell's main aim in scaling Mt. William was to establish a trig. point on the summit from which he could do some surveying. This is why he decided to spend some part of the next day on the summit in spite of the ordeal of the previous night and the weather at that stage. The weather was not kind to him and cloud only permitted him to sight several prominences before he gave it away and descended to his camp near the foot of the mountain.

While on Mt. William Major Mitchell and his botanical collector managed to find about twenty new species of plants which were carefully preserved and later sent home to the eminent botanist Lindley in England who described and named the new species.

Because of its altitude Mt. William is of special interest in the Grampians and several plants grow nowhere in the ranges except on the Major Mitchell Plateau which is immediately to the south of Mt. William and almost as high. Such plants include the Mountain Caladenia on both, and, the Snow Daisy, Snow Gum and Mountain Pepper which are restricted to the Major Mitchell Plateau.

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The excursion to Mt. William on Sunday morning was enjoyed by everyone and there was an abundance of flowering plants to be seen.

The road to Mt. William is sealed to within about one mile of the summit and on the way up provides some fine sight seeing. The road was lined with the colour of many wildflowers. The slopes become rockier as the road climbs and Eucalypt forest and scrub gives away

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

to the smaller more stunted vegetation of the summit where trees are few. Some interesting areas of sloping swampy heath can be seen beside the road on the way up.

The last mile of road at the top is a rough hewn track strictly for four-wheel drive vehicles and foot walking. This track is badly eroded in places and serves primarily as access to the new transmitting station at the top which is somewhat of a blot on the landscape. We noticed with disgust that a lot of rubbish left over from building operations has been simply thrown over a small cliff as an easy means of disposal.

Some of the noteworthy plants included -

Banksia integrifolia, Coast Banksia. In the Grampians this beautiful small tree grows at an altitude of 2000 feet and over, which is thought to indicate the level of the great inland sea, as this is a coastal species. The Grampians occurrence is one of the rare inland localities where this species is known. It is abundant on Mt. William and Major Mitchell Plateau where some fine old lichen bedecked specimens exist often growing in the harshest situations. Because of their environment the plants are reduced in size and are rounded small trees.

Boronia pilosa, Hairy Boronia. One of the most conspicuous wildflowers on the summit and upper slopes where it is nearly prostrate, often growing in the rockiest places. This is in marked contrast to specimens seen a week earlier in the swamps of the Victoria Valley where it grows as a slender erect shrub up to about four feet, amongst dense scrub. The flowers of these plants are fewer and larger.

On the peak it could be seen cascading pink everywhere often growing with Tetratheca and Guinea-flower which provided a pleasing sight.

Burchardia umbellata, Milkmaids. Everyone is familiar with this very common lily but its Mt. William occurrence is worthy of note as the plants here are only a few inches high because of the conditions. They grow in moist depressions on the Mount.

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Caladenia lyallii, Mountain Caladenia. This orchid is found in the Grampians only on the highest parts of Major Mitchell Plateau and Mt. William and this is the only occurrence in Western Victoria. In Eastern Victoria this orchid is found in alpine and sub-alpine regions usually above 4,500 feet. On Mt. William a number of good specimens were found. The flowers are pink and white. Another orchid in evidence was the Musky Caladenia, C. angustata which is very common in the Grampians.

Correa lawrenciana, Mountain Correa is another plant that is dwarfed by the conditions. In easy mountain forests the species is a small tree but here it grows to only about four feet. The form is a showy shrub with masses of yellow-green hairy bells and rusty stems. The leaves are deep green and quite ornamental.

Helichrysum apiculatum, Common Everlasting. Although a very common plant especially in Western Victoria this plant is worthy of note and the form found on Mt. William is especially attractive. Here it grows in the harshest places and is a low densely wooly white perennial with clusters of yellow-orange heads. Specimens observed by members of the party were not flowering well because of dryness.

Leucopogon neurophyllus and L. thymifolius, Beard heaths. Both these species were in ample numbers, especially the latter, which was described by Lindley from Major Mitchell's material. The species are apparently confined to the Grampians and both have small leaves with small white flowers nestling amongst them.

Olearia myrsinoides, Silky Daisy-bush. Mt. William is rich in daisy bushes and the Silky Daisy-bush is one of the most attractive species with leaves deep green above and white beneath. The heads are small with only a few ray florets or "petals" but a mass of these pure white flowers is very showy.

Phebalium bilobum, Truncate Phebalium. This shrub is abundant on the slopes of Mount William and was probably discovered by Major Mitchell as it was described by Lindley. The plant was in full

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

flower and was attractive with the masses of white pink-tinged flowers. The specific name alludes to the leaves which have two small lobes at the apex.

Pultenaea sub-alpina, Rosy Bush-pea. There is no finer pea plant in Victoria than this shrub which grows only on a few prominences in the Grampians among them Mt. William, Major Mitchell Plateau and Mt. Rosea which was named after the plant. Its former botanical name was Pultenaea rosea.

No other Victorian Pultenaea has such brilliant flowers and probably no other Eastern Aus ralian species has either - most of them having yellow or orange flowers. There is a group of more colourful species in the West. The flowers of the Rosy Bush-pea are rich magenta pink and borne in clusters at the ends of the branches and each has a spot of yellow on the standard. The leaves are narrow and short but crowded.

Members were too early to fully appreciate the plants as the heads were just beginning to come out but their abundance gave promise of a fine show to come.

MT. WILLIAM - PLANT LIST:

Acacia oxycedrus	Spike Wattle
Amperea xiphoclada	Broom Spurge
Astroloma pinifolium	Pine Heath
Astrotricha ledifolia	Star Hair
Banksia integrifolia	Coast Banksia
Banksia marginata	Silver Banksia
Boronia nana	Waxy Boronia
Boronia pilosa	Hairy Boronia
Burchardia umbellata	Milkmaids
Conospermum mitchellii	Mountain Conosperm
Correa aemula	Hairy Correa
Correa lawrenciana	Mountain Correa
Cuscata melantha	Dodder
Dianella tasmanica	Tasman Flax-lily
Drosera auriculata	Errienellum

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Epacris impressa	Common Heath
Eucalyptus alpina	Grampians Gum
Euphrasia collina	Purple Eyebright
Gahnia radula	Thatch Saw-sedge
Grevillea aquifolium	Prickly Grevillea
Grevillea ilicifolia	Holly Grevillea
Helichrysum apiculatum	Common Everlasting
Helichrysum obcordatum	Grey Everlasting
Hibbertia fasciculata	Bundled Guinea-flower
Leptospermum juniperinum	Manuka
Leptospermum myrsinoides	Silky Tea-tree
Leptospermum nitidum	Shining Tea-tree
Leucopogon neurophyllus	Beard-heath
Leucopogon thymifolius	Thyme Beard-heath
Marianthus procumbens	White Marianth
Olearia myrsinoides	Silky Daisy-bush
Olearia ramulosa	Twiggy Daisy-bush
Phebalium bilobum	Truncate Phebalium
Pimelia spathulata	Nodding Rice-flower
Pteridium esculentum	Austral Bracken
Pultenaea angustifolia	Narrow Leaf Bush-pea
Pultenaea subalpina	Rosy Bush-pea
Stylidium graminifolium	Grass Trigger-plant
Stylidium solabiferum	Bristly Trigger-plant
Styphelia adscendens	Golden Heath
Tetratheca ciliata	Black Eyed Susan
Xanthorroea australis	Austral Grass-tree
Caladenia angustata	Musky Caladenia
Caladenia lyallii	Mountain Caladenia
Pterostylis longifolia	Tall Greenhood

SOME CONCLUDING COMMENTS.

From Mt. Abrupt, the southern extremity, to Mt. Zero at the northern end (a distance of fifty miles) the bush is pockmarked by numerous small burns, the result of the Forest Commissions' dubious "controlled burning". Indeed it may be interesting to learn the cause of the recent devastating fires in the Mounts Abrupt and

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

Sturgeon region. We cannot see much good in this indiscriminate burning to "reduce the quantity of inflammable material". We have it on good authority that in the North-east Victoria where "controlled burning" is practised that the hop-bushes regenerate in such profusion as to exclude much of the ground flora. This shrub is one of the most inflammable of all and the purpose would seem to be defeated.

The bush is burnt in Spring when there is such an abundance of flower and the main concentration of nesting occurs. Plants are prevented from seeding, and some birds must be destroyed at a time when they can least afford it. The fauna must suffer considerably and one wonders how many koalas like the one we admired along the Mount Zero Road are killed annually. Not only are animals killed but the shelter for hollow frequenting animals is probably destroyed to some extent, causing a reduction in recolonization. No one can dispute the absolute necessity of fire in the Australian bush; so many plants are dependant on it for their propogation. It can be overdone though. Too frequently fires upset the ecological relationships. Ligumes become dominant to the exclusion of lesser plants and the ground flora such as lilies and orchids. The change in plant life must in turn affect the fauna which is so dependant on it.

The Grampians should be left untouched as a unique national monument and living museum, but inroads are gradually being made on the bush. Large areas at Mount Zero have been cleared to enable olive planting, and pine plantations are becoming more common. It is likely that the olives will be spread into the Grampians by birds, and pine trees never restrict themselves to the plantation, infiltrating into the bush where they may successfully destroy the habitat.

Weeds are no less a problem and most of the creeks around Halls Gap have their fair share of blackberries. Logging operations which would seem to cause an excessive amount of destruction facilitate the spread of weeds as they gain a ready hold on the disturbed soil. Blackbirds are probably largely responsible for spreading some weeds, especially blackberry. Blackbirds have been heard singing

NOTES ON THE GRAMPIAN'S FLORA - PART 2 (Cont'd.)

in the most remote parts of the Grampians.

Pigs are wild in the Grampians as a walk along Fyans Creek evidenced. Deer were observed in the vicinity of Lake Bellfield, and in spite of their beauty they are destructive to ground flora mainly through trampling and the compacting of surface soil.

The Forest Commission is to be congratulated for its efforts in prominently labelling a number of trees in the vicinity of Lake Bellfield. An extension of these efforts is urged in the cause of general tourist education, and it would make, for many people, a visit to the Grampians more interesting and informative. An increased knowledge of our bushland leads to a greater interest in, and greater respect for it.

On the other hand it was disappointing to observe the large open spaces left as a result of the Lake Bellfield construction which are being planted with conifers and deciduous trees. Surely in a setting of potential beauty such as this it would be more appropriate to artistically plant indigenous trees which would merge with, and compliment the existing landscape. The area would be ideal for the development of plantings of trees and shrubs from many parts of Australia.

One cannot fail to be impressed by the beauty and grandeur of the Grampians, and, at the same time, by the inroads that man with his various activities is making on them. There is an urgent need to preserve the entire area as a National Park, so that future generations will beaable to enjoy this magnificent natural feature in its original, unspoiled state.

****

Subscriptions are now due, and should be paid to the Hon. Treasurer as soon as possible. His address is shown inside the back cover of this issue.

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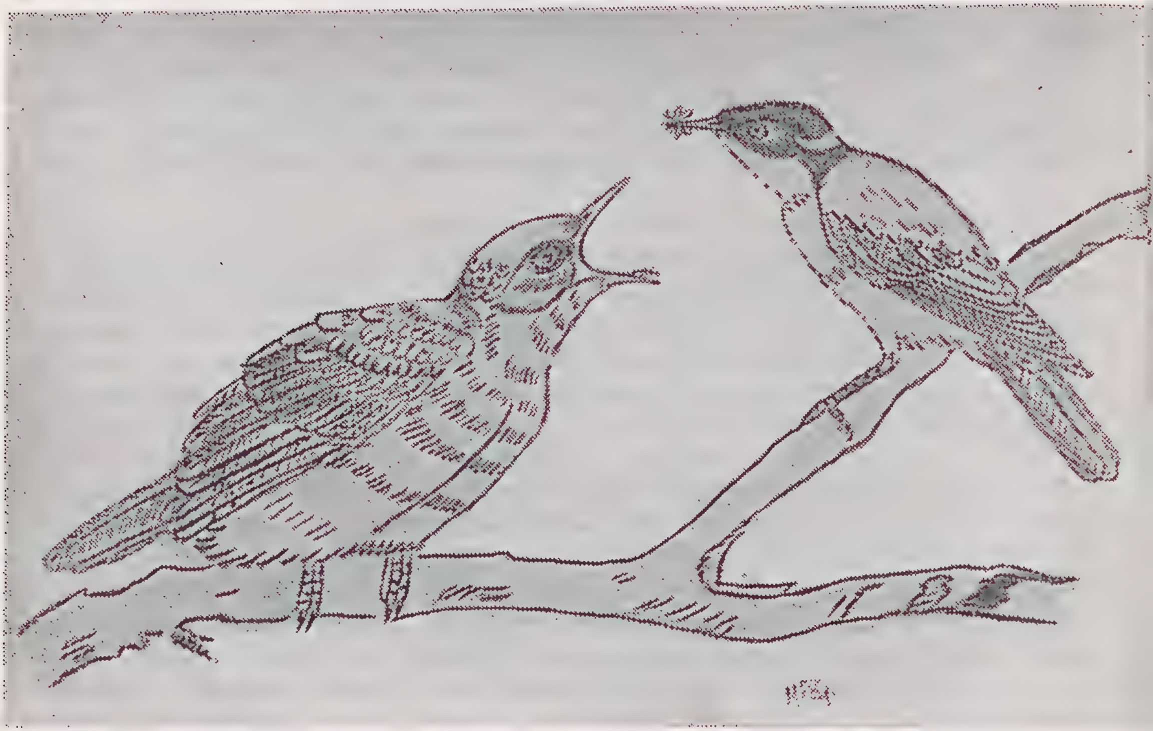
"CUCKOOS AND THEIR KIN."

By Ellen M. McCulloch, Mitcham



Cuckoo being fed by White-naped Honeyeater.
Drawing by Ellen McCulloch.

When I pointed out a Pallid Cuckoo plaintively calling from a suburban telephone wire, my friend asked with sudden interest "Is that the clever bird that doesn't bring up its own family?" The rather harassed mother of four healthy young children, my friend understandably had moments of complete sympathy with such behaviour.

Since very early days the habits of cuckoos have intrigued men, and there are frequent references to them in literature. Perhaps the best-known is found at the end of "Love's Labour Lost" -

"Cuckoo, cuckoo: O, word of fear,
Unpleasing to a married ear!"

So Shakespeare expressed the sentiment long-felt by disapproving

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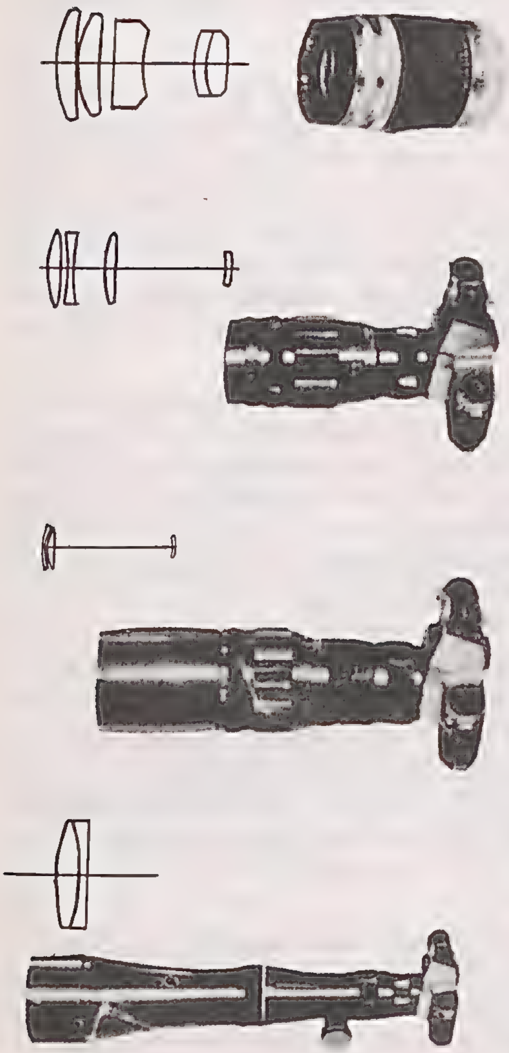

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"CUCKOOS AND THEIR KIN" (Cont'd.)

(perhaps envious) moralists towards these birds who so successfully shelve their parental responsibilities by laying their eggs in the nests of other birds.

To-day we no longer judge and interpret the action of other animals in terms of human emotions and mental processes. Nevertheless the new science of ethology - the scientific study of behaviour - reveals many more similarities between man and his forbears than most people are prepared to admit. One of the most eminent ethologists Professor William H. Thorpe of Cambridge University states that "there is hardly any aspect of the behaviour of animals which may not have some reference to problems in human behaviour".

While it is not suggested that we have evolved either directly or indirectly from a stone-age cuckoo, it is interesting to note that the idea of shelving parental responsibility is becoming more and more widely accepted in our own society, with an increasing number of creches and nurseries in use. Admittedly, we usually have to pay for this service in cold cash, while the cuckoo, arranging her affairs much more efficiently, gets off scot-free.

There are approximately one hundred and twenty-seven species in the family of cuckoo-like birds (cuculiformes), found throughout the warmer regions of the world; of these, only fifty or so are parisitic. The name "Cuckoo" is not applied to all species - there are for example the Road-Runners of southern North America, and Pheasant-Coucals, distributed from Africa through Asia to Australia.

It is not commonly known that birds completely unrelated to cuckoos also practise nest-parasitism. These include the Honey-Guides of Africa, the Cowbirds of America, a South American duck, and several species of small finch-like birds, the Weaver-Finches of Africa.

Australia has thirteen species of parasitic cuckoos and eight of these have been recorded in Victoria, two very rarely. All species normally migrate north during the winter, although occasional individuals remain, like silent eccentric hermits. When the birds first return in the spring to breed they are very

"CUCKOOS AND THEIR KIN" (Cont'd.)

noisy, calling constantly by day and night, and if in the area are unlikely to be overlooked. When an English visitor recently remarked "Don't you have any cuckoos here? I haven't heard one this spring", it had to be admitted that Australian cuckoos would be of little use to clock manufacturers. None of them say "Coock-oo". Still, the four species most commonly seen in Victoria can all be identified by their calls. The large Pallid Cuckoo has a scale-like series of notes running upwards, while the Fantail Cuckoo's trill goes down the scale. The smaller Golden Bronze Cuckoo's short repeated notes have an upward inflection like a man whistling up a dog, and the similar Horsfield Bronze Cuckoo's short whistles have a downward trend.

The subject of nest-parasitism has fascinated naturalists for many years, and heated arguments have flourished, books have been written and papers published about the extraordinary behaviour patterns now involved. Some cuckoos lay eggs which match those of the host-species, some eggs are quite differently coloured. A famous English ornithologist formed a collection of nearly six thousand cuckoo eggs in an attempt to prove, among other things, Darwin's theories of evolution. (Whatever he proved, one cannot help wondering what effect this and other large-scale egg-collections had on local cuckoo populations.) Some birds accept a cuckoo's egg; others of the same species desert the nest; others build the lining of the nest over the egg which remains unhatched. Some newly-hatched cuckoos eject all other young from the nest, but some are reared with the host's brood. The questions still to be answered are many, and perhaps the most interesting is - How did it all start?

It is accepted that the habit is a very old one. Possibly it started accidently, with a gradual reduction in the standard patterns of nest-building and feeding of the young. This is borne out by the fact that among the non-parasitic cuckoos many are poor nest-builders. Among the American Cowbirds, one species incubates its own eggs in a nest it steals, while other related species are parasitic. Various Australian birds unrelated to cuckoos occasionally renovate and use the abandoned nests of other birds. Often the solid mud nest of the Mudlark provides a good foundation.

"CUCKOOS AND THEIR KIN" (Cont'd.)

It is easy to forget that evolution is a still-continuing process. For example, we may be witnessing the gradual change to parasitism in an Australian bird, the Blue-faced Honeyeater which rarely builds its own separate nest if a suitable one is available for the taking. Will it eventually at some far-distant date have cuckoo-like habits?

And what will be the effect of the changing habits in our own society? For a number of seemingly plausible and economically sound reasons more and more people are officially encouraged to live in flats provided for them, and to leave their children in the care of others. Perhaps the future may provide some rather startling answers.

****

"THE BIRD BATH"

By Oonah McHaffie, Park Orchards

Our simple home-made bird-bath has proved itself very popular with the birds, especially the smaller species.

We bought a galvanised rubbish tin lid from a hardware store and inverted it on top of a heavy drain pipe, which has a diameter of ten inches. We placed a small rock in centre of dish and this serves the dual purpose of extra-steadiness for the bath and an extra resting place for the birds.

The narrow rim of the rubbish tin lid is excellent for the smaller birds; even the tiniest thornbills perch there between "dips".

We have placed this bird-bath near a Cootamundra Wattle, and there are also some eucalypts near-by so that the birds can escape to shelter if danger threatens. Also, after playing around in the water they like the security of a tree while they preen themselves.

Birds observed enjoying the bath regularly are the grey fantail,

"THE BIRD BATH" (Cont'd.)

willy wagtail, striated thornbill, brown thornbill, little thornbill and the eastern spinebill; less frequently, the scarlet robin, the white-plumed honeyeater and white-eared honeyeater. There have been a number of birds which I have not yet been able to identify as they are casual visitors and are unknown to me, but sometimes a group can be seen perching on the rim.

At the end of March when the first scarlet robins for the season made their appearance, a male and female were perched on the rim of the bird-bath, together with several striated thornbills who were hopping in and out of the water, and a grey fantail also joined the party. The grey fantails and the striated thornbills frequently bathe together.

The bird-bath has been more successful than our attempts to put out food for the honeyeaters. We mixed up some syrup, according to the approved recipe, and put it in a covered plastic container with holes just above the liquid, also according to instructions, and attached it to a bird-feeder near a shrub. Not one bird was interested. The eastern spinebills continued to enjoy a Grevillea Poorinda Queen nearby. We decided to place the jar at the foot of the grevillea so that the birds could not possibly miss it but we were very amused to see an eastern spinebill standing on the lid in order to reach the flowers of the grevillea and still ignoring the contents of the jar. After a few weeks of renewing the food at frequent intervals we have given up for the time being.

(Editors Note: In the Junior Pages is a sketch of the type of feeder described - let us hope that others who build these have more success than Mrs. McHaffie.)

****

Additional copies of the Agenda of meetings and excursions of the G.F.N.C. can be obtained from the Secretary - why not send one to friends who have not yet joined the Club?

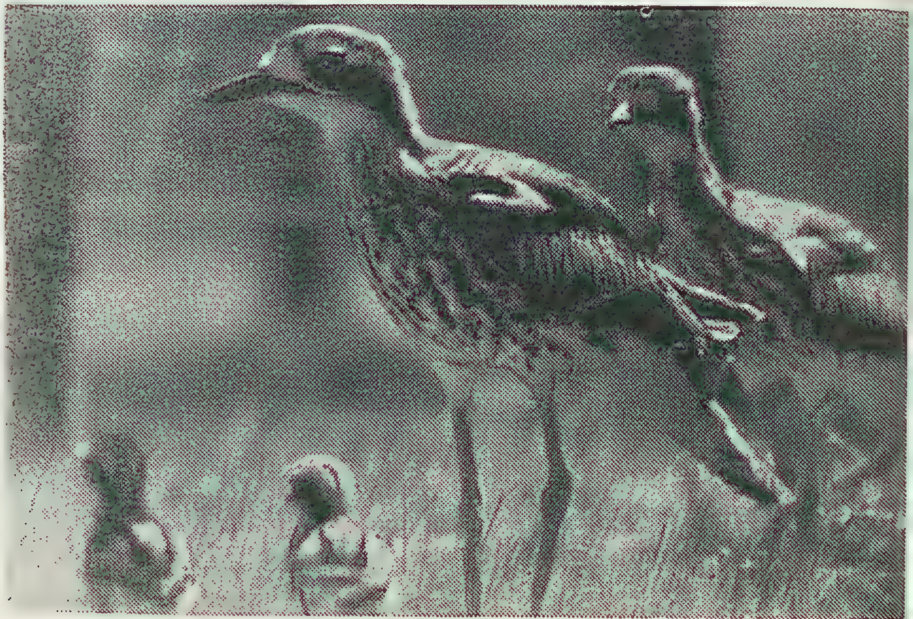
****

at random

"PHOTOGRAPHY OF STONE-PLOVERS": by Jack Wheeler.

Searching a patch of bushland in the Lexton district, north of Beaufort, one of our country members, Mrs. Betty Millar, and her husband found the rare nest of the Southern Stone-plover or Curlew. This was on the 19th October last. The nest contained two beautifully marked eggs. Actually, there was no nest constructed, the eggs just being deposited on the bare earth, amongst ground debris of twigs and leaves.

Watching the progress of this nesting pair, regular visits were made to the area. Early in December the chicks had hatched out. Stalking the family group, Mr. Millar was able to obtain the accompanying photograph of the whole family, without the aid of a hide. A tall blade of grass cut across this picture but when photographing such shy and retiring birds such obstacles have to be accepted.



Stone-plover and young.

Photo by Mr A. Millar.

AT RANDOM (Cont'd.)

"THE COURAGEOUS WILLY WAGTAIL": by Oonah McHaffie.

During the nesting season, we were surprised to see a willy wagtail attacking a magpie.

When first noticed the magpie was on the ground and was very bothered as the smaller bird was attacking from the rear. The magpie kept swinging round to face its tormentor but the willy wagtail was too quick for it and continued to harass it.

The magpie flew into a nearby eucalypt but was still pursued. Then we noticed it, a little way off, crouched on the ground, apparently exhausted and confused by the attack. It had its back to a bush which gave it some protection from the attack from the rear, so that at least its opponent had to face it. The willy wagtail was still hovering over the magpie, but our attention was diverted for a few moments and when we looked again the magpie had made its escape.

OCEAN GROVE NATURE RESERVE: by Jack Wheeler.

On February 21st, of this year, the Committee of Management appointed to control the Ocean Grove Nature Reserve (once known as Cuthbertsons), was legally appointed in the Government Gazette.

This Committee consisting of eleven members will now have the power to get urgent work done on the Reserve. The first job will be the completion of fencing. A complete fire-break, access track etc. are other urgent jobs.

The Committee of Management comprises - Councillors Aitken, Golightly and Guyett; Mesdames Wallace and Wood; Messrs. Lavery, Lonsdale, Pescott, Smith (M.L.A.), and Wheeler. A Lands Officer to be appointed.

"A FUNNY THING HAPPENED ON THE WAY TO THE NEST": by Oonah McHaffie.

Among the amusing sights seen during the nesting season was a sparrow wrestling with a large quilled feather from a fowl.

AT RANDOM (Cont'd.)

When first noticed the sparrow was in a shrub with feather held in its bill but as we watched, the sparrow dropped to the ground and wrestled with it there. Try as he might he could not break it up for easier transportation. He then tried to carry it away intact but, after flying low for a few yards, he dropped it. The weight was evidently too much.

As he picked it up for a further attempt, a myna spotted the prize. The sparrow, observing the rapid approach of the larger bird, either took fright or decided the weight of the feather was really too much, and abandoned it. The myna then carried the feather some way and, after dropping it once, managed to take off with it.

The sparrow was next observed removing a small piece of paper, which, no doubt, was a poor substitute for a nest lining.

AUSTRALIAN BIRDS - AID TO LISTING: by Trevor Pescott.

To assist listing of birds in certain areas, a catalogue of all birds likely to be found anywhere in Australia has been prepared, and adjacent to the names are a series of five columns. Instead of writing in a notebook date, area, bird name, and the numbers of each bird seen, it is now only a matter of filling in the relevant column.

The result is uniform, compact and tidy lists readily accessable. When complete, the lists can be retained, or sent to C.S.I.R.O. Canberra for permanent preservation.

Booklets cost $1.00 for six, plus 5¢ postage, and are available from 36 Arthur Circle, Forrest, Canberra, 2603.

These lists are of a type now becoming very popular, and they will be very useful to a Club such as ours, for the collection of bird lists made on Club excursions, something which has not previously been done systematically.

****

JUNIOR PAGES

This month, we do not have any letters from Juniors to print - it is a pity, for these pages are specially set aside for Juniors to have printed their observations and notes.

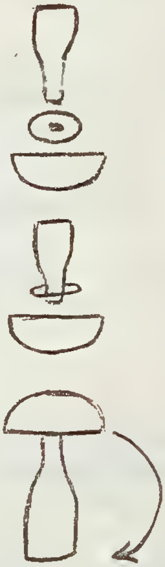
Below is a honeyeater feeder, quite easily built with a little help from your parents; kept filled with a honey and water mixture, it will be used by honeyeaters - once they have found it.

To make the feeder, you need an empty bottle (a cordial bottle, 26oz size is ideal), a plastic bowl (about 2" deep and 4" wide), with a lid in which has been cut a hole to fit over the neck of the bottle, a pole about 4 feet long, a square piece of wood 1/2 inch thick and 4 inches square, and a wire loop to hold the bottle against the pole. Nail the wooden square onto the pole so that it sticks out like a shelf about 1 foot from the top of the pole; the bottle is placed upside down with its neck through a hole in the lid of the dish. The dish is placed on the wood block, the bottle is wired up in place - and your feeder is nearly ready for use.

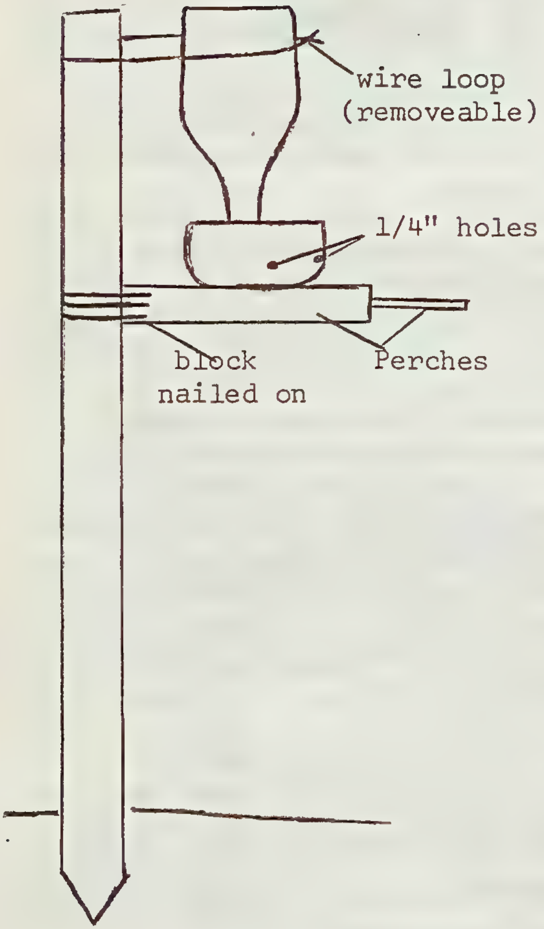
So the honeyeaters can reach the honey, cut 4 holes about 1/4 inch round in the side of the dish; perches are fixed to the wooden block to finish the feeder.

Stand the feeder near some bushes so the birds can gain shelter.

To fill - fill the bottle with a mixture of a large spoonful of honey dissolved in water; place the dish upside down over the bottle neck, then quickly turn upside down.



JUNIOR PAGES (Cont'd.)



A little experimenting will show how to fit the bottle so the honey comes just below the holes.

Remember - patience is needed, and an open bowl of honeywater placed without bottle or lid on the stand may be necessary to let the honeyeaters find it.

(If further details are needed - contact the Editor)

Orchids: In the next few months, many of our native orchids will begin to flower, and on any excursion into the bushland through the winter and spring, you should be able to find some of these beautiful little flowers hiding amongst the grass and fallen leaves.

Orchids do not look like other flowers, for their shapes are often quite strange, hardly resembling flowers at all. But each part of the flower has its own particular use, and is as necessary as are petals, stamens and other parts of ordinary flowers.

To help you learn a little more about the orchids, we will concentrate on these plants in Junior Pages in the next issue of "Geelong Naturalist".

Spiders: Autumn is the time when spiders are usually found in their biggest numbers - have you noticed any more lately?

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Visitors Welcome.

All papers submitted for publication in this journal should be sent to the Hon. Editor.

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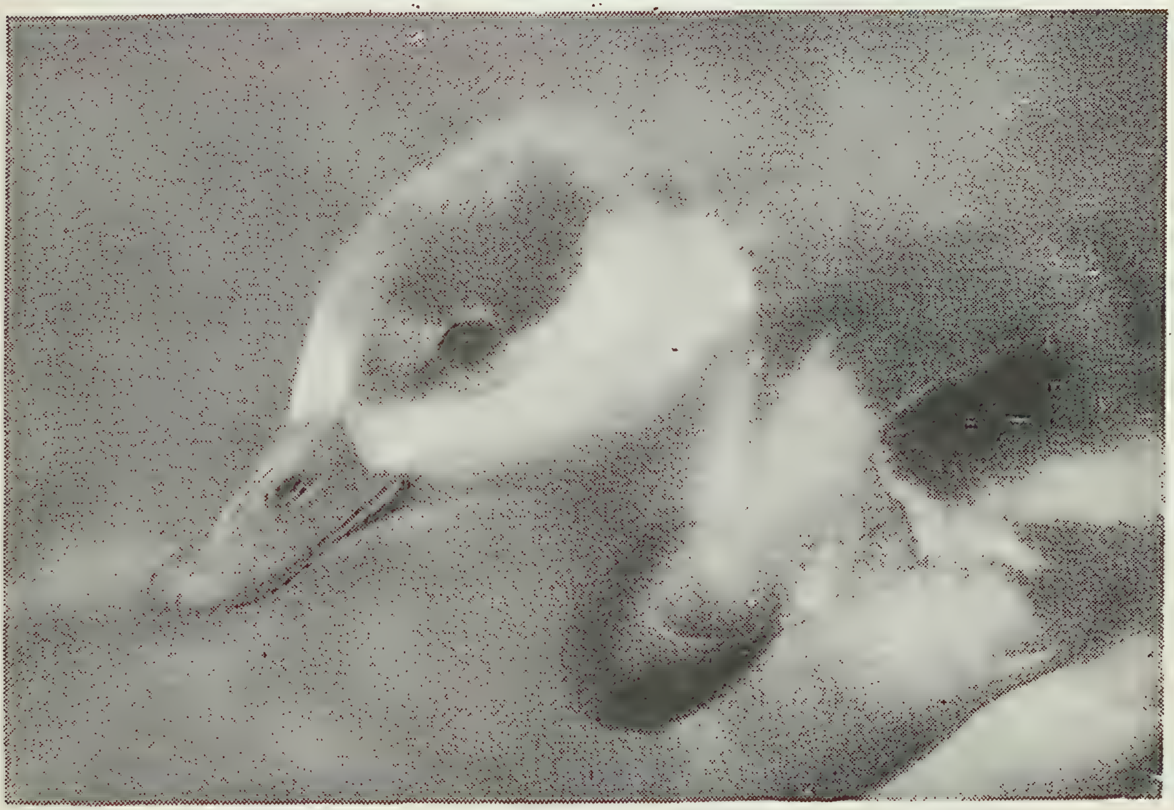

YOUNG MOUNTAIN DUCK

Hon. Editor: Trevor Pescott

Registered at G.P.O. Melbourne, for transmission by post as a periodical

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

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COVER PHOTOGRAPH:

Young Mountain Duck

by R.G. MacKenzie.

GEELONG NATURALIST

Vol.5. No.2. July 1968.

EDITORIAL

In his annual report, Mr. J. Wheeler wrote that he believed we were not doing enough for the Junior members, and subsequently his suggestion to the Club's Committee resulted in the commencement of lectures for Juniors.

The short talks are held prior to each General Meeting, and they are aimed at giving the young Club members an inkling of various subjects; they are not intended to be a "crash program" in teaching the youngsters all that is known about a particular subject.

But it is hoped that an elementary grounding in natural history will be given, for at these early ages, the youthful mind is eager to learn, and is sufficiently supple to absorb such diverse topics as orchids, birds and insects without effort.

As the years pass, it becomes more and more difficult to learn the basic structure of nature, and a solid grounding at this most impressionable and receptive age of sub- or early-teens is never lost.

Most of us are realistic enough to know that we will retain as active, adult naturalists very few of the many juniors who show an early interest; it is natural for youngsters to search for things to occupy their thoughts and energies, and what better than lizards, spiders, or birds to do this?

If this early interest does not result in dedicated naturalists, or active conservationists in latter years, the loss is not as great as we may at first think. The important thing is that instilled into all of us is the knowledge that there are such things as wild creatures worthy of study and preservation. And knowledge absorbed as a youngster is rarely lost, even if it is often pushed into a somewhat disused corner of the mind.

Recently, I was asked how can the average layman help conservation - my answer was to take an interest in proposed conservation projects, to voice support, or if warranted criticism, of the projects, but always take an interest in them.

TREVOR PESCOTT,
Hon. Editor.

TANKS

By R.R. Baldwin, Corio

In the interior of Australia there are thousands of tanks, some of them ironclad and known as such. Nevertheless, no neighbouring people need grow timorous at the thought of an armoured nation, spoiling for a fight. Nor need any more sophisticated Australian city dweller, wise with the half-remembered knowledge of youth, throw up hands of horror at the thought of jungles of galvanized iron. The tanks in question are different altogether from the mind pictures hinted at above. They are mere holes in the ground, generally rectangular, to contain water, and they are common in all the drier parts of the continent. In the droving days they were vital. Nowadays, stock travels by huge transporter and a hundred miles is nothing. Time was, however, well within living memory, when the animals had to travel on their own feet and ten or so miles was a day's journey. Then, water at frequent intervals was a vital necessity and to meet the need the tanks were constructed.

A hole was scooped in the ground and the spoil was heaped into a wall all round to make the tank. The careless might call them "dams". In this, of course, they are wrong. A "dam" holds back a creek of running water, whilst the tank, though similar in appearance, merely contains water that comes to it from artificial sources. It may be filled from a bore or from a channel which runs once a year; if from a bore there is probably a windmill to pump the water from bore to tank. Sometimes the tank was an "ironclad", like the one at Nowingi, near Mildura, which has a whole artificial hillside of galvanized iron to catch the sparse rain of that dry region. Whatever the type of tank there used to be stock-troughs, with probably a hand-pump to fill them. Now, of course, they have fallen on evil days. The troughs are holed by rust, while the pumps loll on tumbledown stands and suck only air, though the big tank is full.

So much for the purpose of the tanks - they held water as houses hold people. And, just as houses vary on a street, so do tanks vary on a stock route. There is Trinita, for instance, between Ouyen and Hattah in the Victorian Mallee. Here there is a great, wide, open flat, with sandhills on either side clothed in Mallee

A Mallee gate. Pine and cabbage - tree.

Tank at Cassell's Crossing. Buloke on bank.

Photos by Rolf Baldwin.

TANKS (Cont'd.)

scrub. The flat is otherwise bare, as are the four clay walls of the tank in the midst, very austere. Then, out by the Pink Lakes near Underbool, there is a nameless tank, a mere little lake of fresh water, with bull mallee all around and very little else. Away and away to the North in New South Wales, between Cobar and Bourke, one finds Goorilla (or is it Gorilla?) Tank. This is a big one. There are two lines of troughs with a huge mill standing guard, close pressed by the scrub which extends for scores of miles in all directions. Closer to home again is Cassell's Crossing, just short of Carwarp, on the Melbourne - Mildura railway. Here there was once a homestead where now all is deserted. Once, doubtless, children were there to watch the horses come in for their evening drink; now belah, acacia, mallee-gum and Murray pine brood in silence. Lastly there is a tank which has virtually disappeared. Forty years ago York Tank stood in a wide pine flat, where the soldier settlers of the day had made for themselves a pair of tennis courts. In those days, while his elders played tennis, a youngster watched with eyes of wonder the birds that came in to drink. "Ringnecks" and "smokers" were of the crew, as well as crows, galahs, babblers, "grass parrots", choughs and dozens of others for which he did not then have even the vernacular names.

In the old days the tanks were vital to the travelling stock. Nowadays this need has almost vanished, but Australians far older than we are have long taken advantage of the amenities which the newcomer, Man, has built for his own ends. Ever since they were first put down the tanks have become the morning and nightly gathering places of the birds and animals of the localities which they serve. Almost, it might be said, they have become the pubs of the outback fauna.

If one regards the tanks as hotels then perhaps Goorilla Tank is the "Young and Jackson's" of the scrubs, for there all of the outback rubs shoulders. For the watcher it is a place beyond compare. As the sun vanishes below the scrubs he sits silent and still, waiting for what he may see. Galahs, sulphur-crested cockatoos, crows, choughs have come and gone. They have their rowdy drink and then move off to parties of their own, leaving the bar-counter free for quieter folk. First it is a vixen, very demure, who sips and then departs. Then it is kangaroos, wary, but reasonably confident, then a few emus. These ancient birds stalk in, self-assured, kneel with legs reversed to our way of thinking and drink long and thankfully. Finally, all pauses, false alarms, proppings and cautious advances, come half a dozen brumbies, the dust of their movement showing like a silver mist against the rising moon.

Meanwhile, in the last half hour of daylight and the first of twilight come the birds of the pigeon, parrot and finch tribes, drinking on their own side of the water, seemingly oblivious of their larger compatriots on the eastern bank. Their cooings and twitterings fill the air. The main groups are red-backed parrots, quarrions, budgerigahs, crested pigeons. Unlike humans they seem each to be happy to go their own uninterfering way. The parrots are in large bodies, which fly hither and thither with much twittering, false alighting and timid starts before finally they settle to drink, and even then it is with much elbowing and expostulation. The pigeons are much better behaved. Bronzewings are solitaries or pairs, but the crested pigeons come in family by family. It is fascinating to watch how a dozen or so will be on the strand drinking their full, while other groups sit in patience further up the bank. Then, when the drinkers have finished, they flitter away sideways and a new group, without the slightest disorder, thankfully takes their place.

So much for Goorilla, but the others also have their memories. At York the picture is of a long, wide flat, with hop-bushes here and there, and many a Murray-pine, now, alas! gone before the bulldozer. That flat was the particular abode of choughs and babblers. Then there was the unnamed tank by the Pink Lakes - if only it had some such memorable title as "Broken Bucket". The camper here will be lucky if he has anything more to welcome him than a few Mallee parrots and galahs, but even they, though common enough, are very beautiful. And at Trinita what may not happen? Once it was a family party of four emus, squatting in the water bathing themselves, as hens do in sand. On another occasion it was Major Mitchell cockatoos. There were only two of them in their exquisite pink and white, but what a picture they presented against the dark green

TANKS (Cont'd.)

background of scrub, perched in the symmetry of nature on an old dead stump. To see this, once in a lifetime, is to have lived!

Best-loved of all there is Cassell's Crossing. In that happy spot the scrub crowds thickly round. Mallee, belah, scrub pine, Murray pine, cabbage bush, hop bush, salt bush, porcupine grass - all are there, with many another that the trained botanist could name. Across the way are the ruins. Only a couple of walls and the remains of an old bough shed are left to show that this was once the abode of men. Here, if he knows the place, the wayfarer may camp. In the evening he may watch all the birds that have been mentioned above. The Mulga parrot will probably be there, the ubiquitous black and white fantail - why does nobody think of a happier name for this perfect little bird? - choughs, magpies and many a honeyeater.

As the wanderer sits there musing by his fire. Orion or Scorpio will ride high, so bright that they seem almost close enough to touch. Then the night train will go thundering by. After that there will be silence again. The watcher will listen, the stars will listen, the scrub will listen, but no more will the call of the dingo be heard as once it used to be in those parts. Only the sepulchral note of the boobook will ring out to give a reminder of the ancient inhabitants of the land.

* * *

EASTERN SPINEBILL - information requested.

I am collecting information about the EASTERN SPINEBILL, particularly breeding records; there appears to be few Melbourne suburban nesting records, and it would be interesting to find their breeding habitat.

The birds visit my nectar-feeders almost daily, but disappear in November altogether, although the food supply in flowering plants and the feeders remains; they return in about the last week of February, accompanied by immature birds. I would be interested in any information about this bird - breeding records and plants visited by the Spinebills in gardens in particular; all information would be gratefully acknowledged.

Mrs. E.M. McCulloch, 6 Bullen Ave., Mitcham.
3132.

"I WILL LIFT UP MINE EYES ..."

By Ellen M. McCulloch, Mitcham

Most of us by the sheer force of necessity live in suburban areas, closely built-on, and with a corresponding reduction in the numbers of native birds. One way to enlarge our knowledge is to get into the habit of looking UP at the birds as they pass over at varying heights.

These flights fall readily into 3 categories - the short 'hops' of residents moving about their territories, the brief visits of occasional wanderers mainly looking for food, and the high flight of those that are steadily on the move elsewhere, and which rarely visit suburban backyards.

Once you get into the habit of deliberately going out to the backyard to look up, you will be amazed at how much can be seen. For instance this morning I watched an Eastern Shrike-tit fly across to a wattle-tree in the backyard - the first time in six years of recording that I have ever seen one here. Hidden in the wattle foliage, I would probably have missed it.

Some species are obliging enough to call in flight, and these include pardalotes, silvereyes, parrots, goldfinches, ravens, swans, lorikeets and cuckoo-shrikes. I know that at least in my small area of garden some will be able to rest and feed for a while without picking up lethal DDT-laden insects - unless of course these have come in from elsewhere. Seeing birds feeding in the shrubs and trees we have planted in the last six years is a satisfying experience for me as well as the birds.

The 'high-flyers' are amongst the most exciting to note. Binoculars are certainly useful here, and it's no use saying you can't see a bird in flight through them; practise every day until you can. It is well worth the effort.

It may not be absolutely essential to have binoculars strung around your neck when you hang out the washing, but I can testify to the convenience of it. Having them neatly encased inside is of little use if you're outside. Birds fly deceptively quickly, and without binoculars what you saw may forever be an irritating mystery.

"I WILL LIFT UP MINE EYES ..." (Cont'd.)

From my home in Mitcham, 13 miles east of Melbourne, I have a long list of species en route to somewhere. These include those pattern-makers the Straw-necked and White Ibis, Cormorants, waders, Swans, and more birds of prey than I would have thought possible in a suburban sky: one Wedge-tailed Eagle, a Black-shouldered Kite, several visits from a Whistling Eagle, and irregular repeated sightings of Australian Goshawk and Little Falcon.

For beginners, hawks are not easy to identify, and the Bird Observer's Club "Field Guide to the Hawks" by H.T. Condon is very useful, as it includes under wing patterns. Available from B.O.C. Publications Sec. Miss E. Ritchie, Flat 3, 6 Grattan Street Hawthorn. Vic. 3122. Price 50¢. plus 9¢ postage.

Undoubtedly my most spectacular sighting was the 3 Pelicans which staggered me by flying overhead only 50 feet up - goodness knows where they thought they were going at that height. Swifts, to me, fall into a category of their own; their fascination grows with the seasons, and their visits are always a good excuse to leave the house-work. They often fly so high that they are only visible through the glasses.

We know little in Australia about migration routes of animals. The Royal Australasian Ornithologist's Union is conducting an Individual Observation Point survey to find out more about the migration and other movements of our birds. Amongst other things, it is hoped to clarify some aspects of trans-Bass Strait migration. This survey calls for regular observations, but is not difficult or terribly time-consuming. The convenor of the survey is Mr. D.G. Thomas, of 2 Lallaby Road Tasmania 7009, and he will be pleased to hear from all competent observers, whether they are R.A.O.U. members or not.

So much has been written for so long about bird migration that it is difficult to know where to start reading. One beautifully written book which is very readable is "Down the Long Wind" by Garth Christian. It was first published in 1961 by Newnes of London, and is a study of bird migration. The final chapter deals with the future outlook for migratory birds, and it doesn't look too rosy.

By setting aside enough areas now to form oases both large and small

"I WILL LIFT UP MINE EYES ..." (Cont'd.)

for these travellers, by planting more trees, by taking the time to interest school-children, by pestering the authorities to move now against the indiscriminate use of pesticides without sufficient research, we may help to provide for future generations the pleasure of watching these graceful wings that lift our hearts as well as our eyes.

I quote the final words of "Down the Long Wind" --

> "Especially, perhaps, we need to nourish a sense of trusteeship towards those migrating birds which the blind Milton found to be "intelligent of seasons", as millions of them set forth
>
> 'Their aery caravan; high over seas
> Flying, and over lands.' "

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KARKEEN WALKABOUT

By C.J. Gibson, Belmont

This walkabout is to discover that legendary place called Karkeen, the source of the outstanding stone material referred to as greenstone and so highly valued by the aborigines for their stone axes.

Aboriginal axe-heads made from this particular stone have been found all around the Geelong district from camp sites at Durdidwarrah in the north, and Inverleigh in the west to Indented Heads at the western extremity of the Bellarine Pen. and Torquay in the south. The intriguing question is, where did the aborigine get this stone?

William Buckley, the convict who escaped in 1803 from Colonel Collin's settlement at Sorrento and lived with the Geelong natives for thirty years, said this of their tomahawk; "The heads of these instruments are made from a hard black stone, split into a convenient thickness, without much regard to shape. This they rub with a very rough granite stone, until it is brought to a fine thin edge, and so hard and sharp as to enable them to fall a very large tree with it. There is only one place that I ever heard of in that country, where this hard and splitting stone is to be had. The natives call it Karkeen; and say, that it is at a distance of three hundred miles from the coast, inland. The journey to fetch them is one of great danger and difficulty; the tribes who inhabit the immediate localities being very savage, and hostile to all others. I was told, that it required an armed party of resolute fighting men, to obtain supplies of this very necessary article; so that the tomahawk is considered valuable for all purposes. They vary in weight from four to fourteen pounds; the handles being thick pieces of wood split, and then doubled up, the stone being in the bend, and fixed with gum, very carefully prepared for the purpose, so as to make it perfectly secure when bound round with sinews." (1)

That interesting account would seem to give us a helpful hint for commencing our walkabout - a long way inland. But in which direction?

Perhaps, first, we should question the distance. Obviously the

KARKEEN WALKABOUT (Cont'd.)

natives didn't tell Buckley that it was three hundred miles but that he interpreted their explanations in such terms that he thought might be meaningful to European readers. We assume also, of course, that John Morgan correctly transcribed Buckley's story. Linked with the frustratingly vague reference to direction we have this exceedingly doubtful reference to distance - exceedingly doubtful for it is almost certain that nothing more precise than a rather general conception of "a long way" should be understood from this. (2)

A somewhat similar stone, epidiorite, is to be found at Dog Rocks near Batesford and also at Gleeson's Hill, near Ceres in the Barrabool Hills. This is a greenish or greenish-grey stone, course to fine grained but hard and tough. Many edge-ground axes of this stone have been found in the district, particularly in the south around Bream Creek and Torquay, and also from a number of places in Central Victoria. These places would be no more than about six miles from the present city of Geelong in a N.W. and W. direction respectively. Although aborigines apparently have at some time made axes from stone from these sources Buckley made no reference to the fact and, it would seem, certainly was not referring to either as Karkeen. Both are very interesting places for going walkabout and do warrant a visit, but our present search must continue further afield.

The next clue we should follow is provided by C.E. Sayers the editor of the reprint of Morgan's "Life and Adventures of William Buckley". Not only are we indebted to Mr. Sayer for providing us with this reprint edition making such a fascinating story readily available to us but also for many additional footnotes to assist the reader. In one such footnote referring to Karkeen Sayers says; "Origin of this stone cannot be established. May have been the Otway Ranges, but if the location was, as Buckley suggests, 300 miles inland from the coast it may not have been within Victoria. Granite is found in parts of the Grampians, but this is not 300 miles from the coast."(3)

It is just possible that Karkeen may have been in the Otway Ranges

KARKEEN WALKABOUT (Cont'd)

as is suggested, for a diabase rock with similar physical characteristics is to be found at Chatsworth on the Hopkins River in the Western District. This would be about 110 miles from Geelong but only about 50 miles north from Warrnambool on the coast. This "somewhat similar rock occurs at Mt. Camel at the south end of the Colbinabbin Ranges, also at Mt. Stavely, Chatsworth, and Juluka in the Western District of Victoria, also at Howqua River and Dookie," according to Mitchell. (4) It was obviously, therefore, readily available to the tribes inhabiting the Western Districts - the Gurnditjmara and Tjapwurun - and could have been obtained quite easily by the Geelong tribes - the Kurun and the Wataurun - for such neighbouring tribes would meet for corroborees and barter from time to time.

Many of their greenstone axes were, however, of a far superior quality stone than that to be found at these sites. We must continue our search elsewhere and now propose to do so in another direction - north - to consider Mt. William.

"The Mt. William diabase is the outstanding stone material used for axes; it is probably the best example of a high quality axe-stone to be found in Australia."(5) This opinion from Mr. Mitchell is based on many years field work and study of the aborigines' stone implements and on numerous visits to many of their old camp sites, many of which he first discovered. Is it not possible that Mt. William is, indeed, Karkeen? At least it is well worth a walkabout.

Mt. William can be visited easily, and, indeed was by the G.F.N. in August 1967. Possibly the first impression gained is of wonder at the huge quantity of chips and flakes which cover such a large area of the hillside. The blanks were quarried and then worked into shape on the site - evidenced by these heaps of chips and flakes - the result of the axe making process. The numerous circular depressions to be seen around the top of the ridge that puzzled me were thought by Mitchell to indicate "where suitable stone has been won". "No hammer-stones of any sort have been

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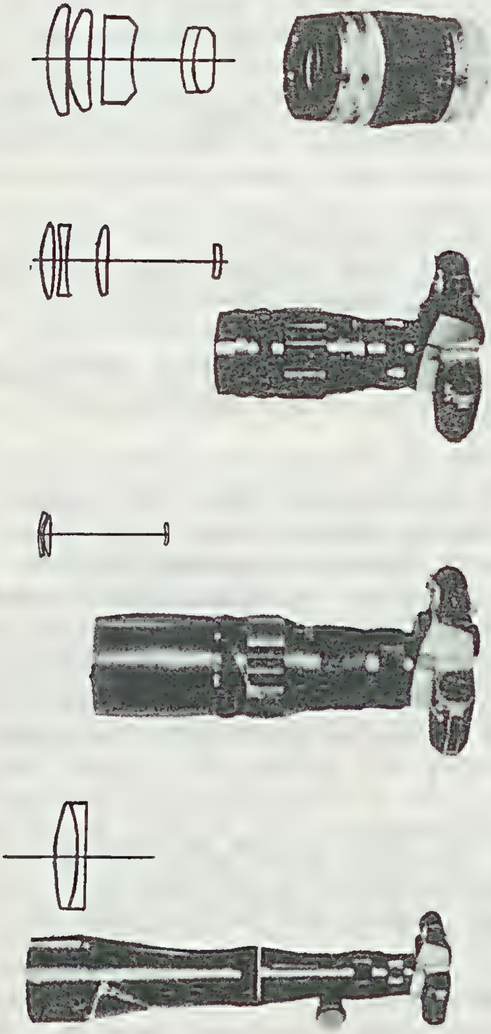

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135 mm, 200 mm, 300 mm, 500 mm

KARKEEN WALKABOUT (Cont'd.)

found on these sites, so it is reasonable to assume that diabase axes were used in chipping of the blanks. Many diabase axes found show much wear on the hammer end, as if they were used for this purpose .... Also no whetstones have been found in the vicinity, indicating that the grinding of a working edge was not done at the quarries, the blanks being taken away for the final fashioning."(6) In fact it is highly probably that the ideal sandstones of Toorak also in the Wurundjerri tribe's territory were preferred for this purpose.

On this point Buckley's comment is of interest in confirming that the Geelong tribe worked up the fine cutting edge, although apparently with granite, a plentiful supply existing within their territory - the You Yang hills and Anakie district are within fifteen miles of Geelong. Sandstone was also available and very much closer,too,and could well have been used for touching up the edges after wear.

Although these quarries can be inspected and stone axe blanks found the craftsmen making them are no longer to be seen - in fact "none of the early settlers in Victoria appears to have seen the Mt. William aboriginal quarries in operation"; says Mitchell, "possibly the aboriginal quarryman, Billi-Billeri, a headman of the Wurunjerri tribe had ceased operations before the settlers knew of its existence."(7) There would seem little doubt that the early exchange of steel hatchets soon superseded this stone age industry.

For those taking a walkabout to Mt. William the following quotations might add to your appreciation of the site - concerning Billi-Billeri's tribal rights and method used in making axes.

"The family proprietorship of this quarry (Mt. William) had wide ramifications, including more than Wurunjerri people. On the one side it included the husband of Billi-billeri's sister, one of the headmen of the Kurnung-willam, who lived at Bacchus Marsh, and who was named Nurrum-nurrum-biin. On one side it included Ningu-labul, and in another direction Bebejern, the son

KARKEEN WALKABOUT (Cont'd.)

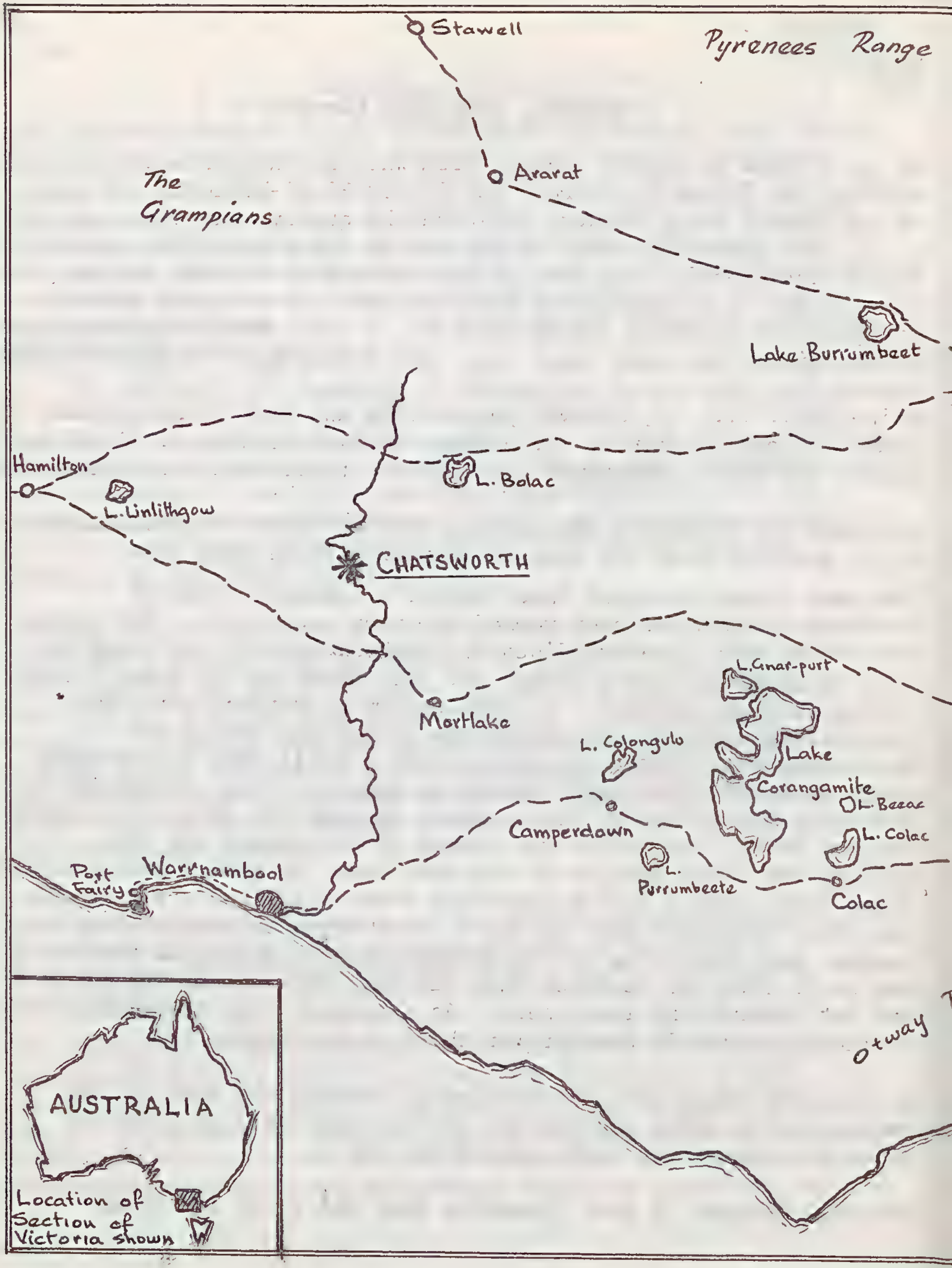
of an hieress in quarry rights, from whom an interest came to Berak through his father Bebejern. But it was Billi-billeri, the head of the family whose country included the quarry, who lived on it. ...... his place was taken by the son of his sister, the wife of Nurrum-nurrum-biin, who came on such occasions to take charge, when it may be assumed, like Billi-billeri, he occupied himself in splitting stone to supply demands......... When neighbouring tribes wished for some stone they sent a messenger to Billi-billeri saying that they would send goods in exchange for it, such as skin-rugs....... if, however people came and took stone without leave, it caused trouble and perhaps a fight between Billi-billeri's people and them. Sometimes men came by stealth and stole stone."(8)

Although the following description does not refer to Mt. William it is possible that the same or similar methods were used.

"We came across a quarry (near Renner's Springs - Central Australia) which had been worked for many years past. The ground was strewn with numerous discarded flakes, because for every one that is considered good enough for use, there are at least a score thrown aside as useless. At this quarry we watched with much interest the process of manufacture as carried out by the Warramunga man. First of all he chose a small lump of quartzite which measured about eight inches in diameter, the surface at one end being approximately flat, whilst towards the other it slightly tapered away. The latter was placed on the ground and then, holding the block upright in his left hand, he gave a series of sharp blows with a little quartzite stone held in his right hand. The first two blows were in spots close together just within the margin, each resulting in the detachment of a flake, in such a way as to form two surfaces that ran down the face of the block and met towards the lower part. As a general rule these two surfaces are not in contact for their whole length."(9)

A whole day could well be occupied in shaping the rock to the required size while another day or two might well be taken to grind the edges down sufficiently for use.

Mitchell thought it also "possible that the block and anvil


Stawell
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Lake Corangamite
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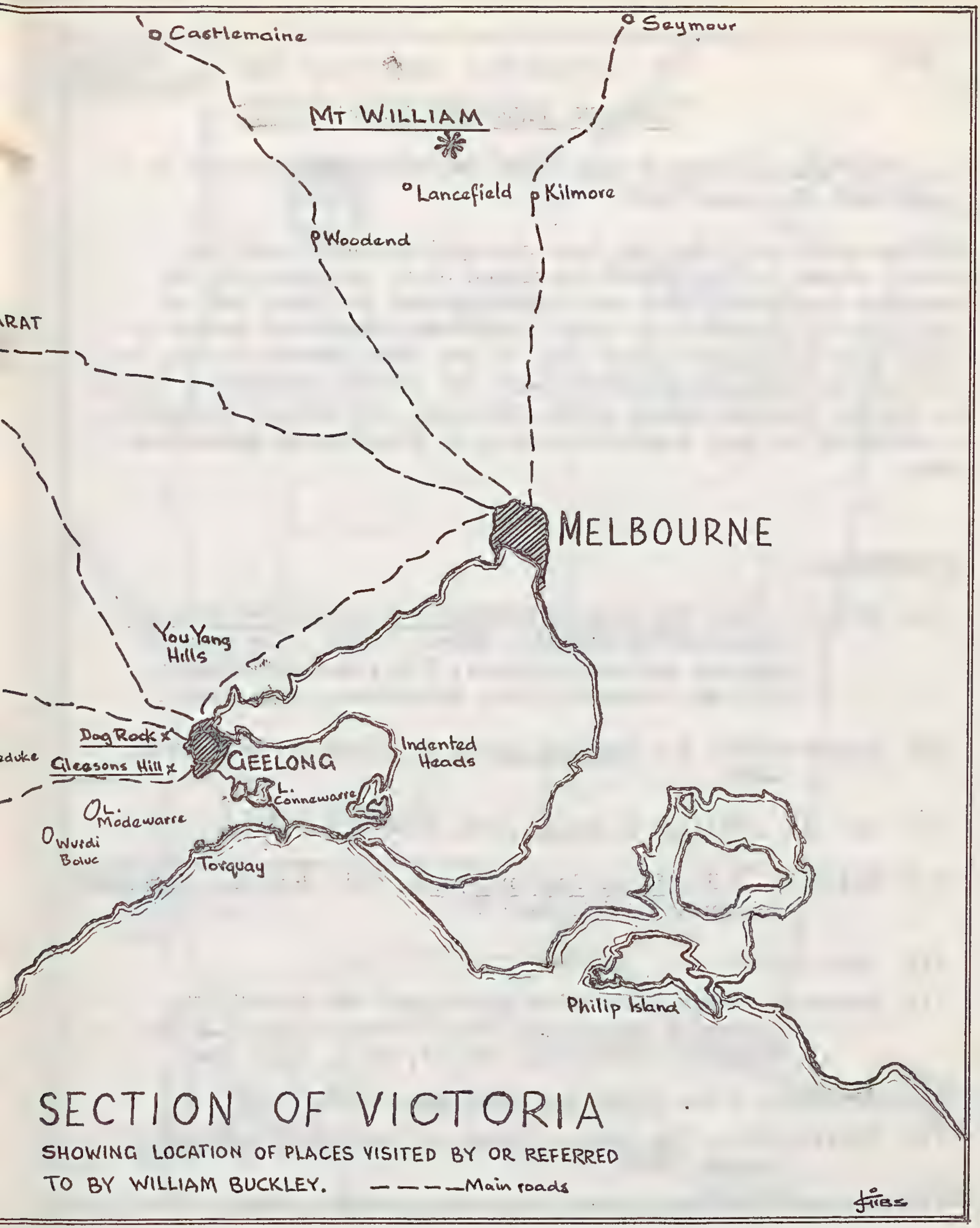
AUSTRALIA
Location of Section of Victoria shown



SECTION OF VICTORIA

SHOWING LOCATION OF PLACES VISITED BY OR REFERRED TO BY WILLIAM BUCKLEY. ———— Main roads

KARKEEN WALKABOUT (Cont'd.)

technique was one method used, that is, striking the blank on a large mass of stone."(10)

Whether your walkabout has been accomplished physically by actual visits to the places mentioned or by dreamtime in the armchair tradition, have you a feeling that you have been on walkabout to Karkeen? To date I have been unable to locate or trace this aboriginal place name or any name like it so rely on the sort of evidence presented here for considering that a visit to the Mt. William quarry sites concludes our Karkeen Walkabout, a walkabout to that legendary source of first grade greenstone axes.

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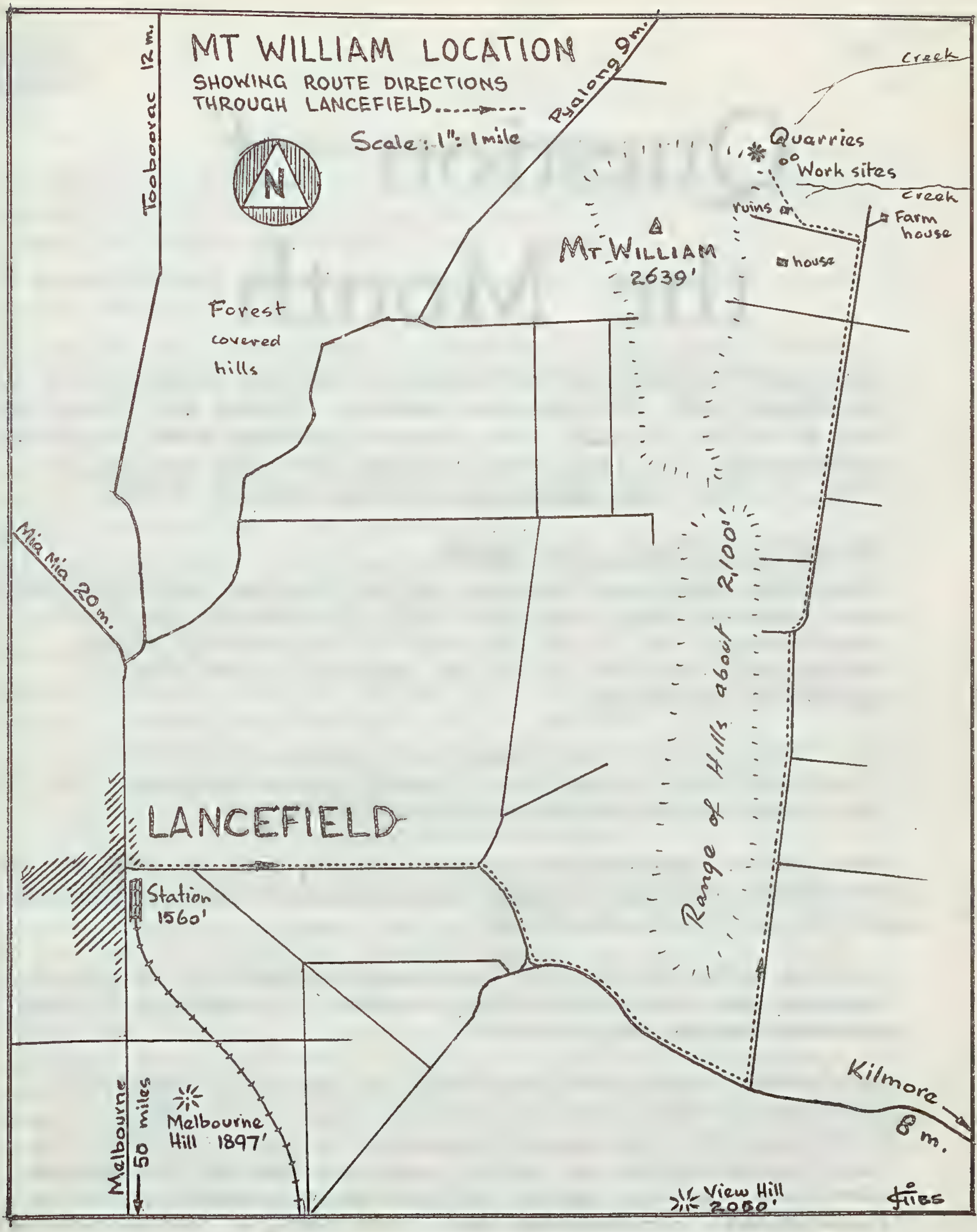

MT WILLIAM LOCATION
SHOWING ROUTE DIRECTIONS
THROUGH LANCEFIELD
Scale: 1": 1mile
N
Tooborac 12m.
Pyalong 9m.
Creek
Quarries
Work sites
Creek
ruins
Farm house
MT WILLIAM
2639'
house
Forest covered hills
Mia Mia 20m.
Range of Hills about 2100'
LANCEFIELD
Station
1560'
Kilmore
8 m.
Melbourne
50 miles
Melbourne Hill 1897'
View Hill
2080'

Question of the Month

This question concerns the fondness of certain animals for a particular food. The questioner states: "Snakes and lizards are said to be fond of milk; blue tongues have been known to relish strawberries; and it is usually agreed that cats are fond of fish. Is there some explanation of these strange tastes?"

The reply is from Mr. E.G. Errey.

There have been more fallacies and tall stories told about snakes than about any other creatures. This is evidently one of them, though perhaps not as far from reality as stories of snakes sucking milk from cows out in the paddocks, a feat which is physically impossible.

D.R. McPhee, in his book 'Snakes and Lizards of Australia' (Jacaranda Pocket Guides) says "Snakes show no preference for milk, and, given the choice will drink water every time."

In regard to blue-tongues and strawberries, this is after all not so strange, for their natural diet consists of berries and leaves as well as insects, snails etc.

To quote McPhee again, "Its food consists chiefly of snails, and includes some insects and native berries. In captivity it also consumes bananas and raw meat."

In a garden, snails certainly would be readily available, and strawberries would be almost the only fruit within reach. I consulted some young acquaintances whose lizard collection was recently featured in our Editor's nature column of the Geelong Advertiser, and they agreed that bananas were popular with the blue-tongues. Strawberries that I took along as testing material were licked but not eaten.

QUESTION OF THE MONTH (Cont'd)

Jack Hyett in 'A Bushman's Year' writes "The blue-tongue feeds on vegetable foods, fungi, berries and leaves with a few insects as a tasty variation in the diet."

It seems unlikely that snails would be very plentiful in "Bluey's" natural habitat.

As for the cat's partiality to fish there seems to be no doubt. As the cat is a carnivorous animal this is not surprising, but whether this partiality is exaggerated by comics and similar literature I don't know.

Not having any cats of my own, and not wishing to encourage other folk's cats, I have done no experimenting to find the strength of their preference for fish over meat.

The only reference to the subject that I can find in serious literature is to a painting in an Egyptian tomb dated about 1400 B.C., which shows a cat enjoying a meal of fish under its mistress's chair.

Several books I consulted in the 'Cat' section of the Geelong Regional Library had nothing at all to say about fish.

* * *

BLUE TONGUE LIZARD.

By Joyce Hunt, Paraparap.

Taking the wash-up water out to the garden, I almost trod on the very old, very fat, very slow blue tongue lizard who has been living in our garden for a decade that we know of, and probably much longer. He (or she) is quite big, about 18 inches, and is attractively marked with yellow on his grey back. A little later, he was seen sucking up the moisture - or the particles of food - where I had thrown the dish-water. In the midst of drought conditions, it was evidently difficult to find moisture. Since then he has been supplied daily with a saucer of milk which he seems to enjoy. The wrens also have developed a liking for milk and one frequently sees four or five wrens assembled around the saucer, drinking milk! The blue-tongue lizard has been seen licking up the rolled-oats that were put out for the wrens!

"REQUIEM FOR A WILLY WAGTAIL"

By Oonah McHaffie, Park Orchards

The family, mother and two young had been observed in the paddock for a few days. Mother was busy feeding the two babies, although both were able to fly, and appeared perfectly capable of fending for themselves. Father was not in evidence but was probably somewhere in the vicinity.

A few days later one of the young birds made its appearance on the lawn outside the bedroom window. It was a little while before we noticed that one wing was drooping and almost touching the ground. It gave it a slightly lop-sided appearance. It seemed unable to fly, although it could rise a few inches off the ground before dropping again. It ran rapidly along the ground to catch insects but would frequently fall over in the process through loss of balance.

The little bird was not unduly frightened when we got close to it but, although it would let us get to within a foot or two,it was still too quick for us to catch it for examination.

The mother bird made her appearance a few times but then abandoned it and returned to the paddock to her other offspring.

The courageous little bird fended for itself, and stayed in the garden for four days. During this time it seemed to make its appearance about 9 a.m. and disappear at about 4 or 4.30p.m. We could not discover where it spent the night. This suited us well as, during the daytime hours, I was able to keep my two cats indoors, or at least under surveillance.

We were in something of a dilemma as to whether to leave the bird in the garden where there was risk from the cats but where there was water (rather incongruously - in the cats' water dish) or to try to get it back to the paddock where there was no water at a low enough level for it to drink but where it might have assistance from the parent bird - if the latter was prepared to take over her duties again.

We still had not made any decision when on the fifth day it was missing and, eventually, we discovered it back in the paddock.

"REQUIEM FOR A WILLY WAGTAIL" (Cont'd.)

We did not know how it got there. We did not think it could have got over the fence but there was room under the gates for it to have got through.

Then for a day or so we did not see it until one morning our fears were confirmed. We found it in the paddock, dead, on its back but with no signs of a violent death.

During its time in the garden there had been several days of heat with strong north winds. We wondered if this had taken its toll or whether it had no longer been able to get food and water.

- - - - - - - - - -

Since writing the foregoing, I read an account in "The Weekly Times" of 22nd November, 1967, of a serious disease attacking poultry. It is leucosis, a virus disease, one form of which attacks the nervous system. With this neural form the main nerves leading to parts of the body degenerate and the muscles become paralysed. The article went on to say that practically any muscle can be affected but the ones most obvious are either those on the wings or the legs. When the wings are affected they drop down and the flight feathers touch the ground. The disease can appear at any age but often strikes birds between 12 and 20 weeks of age. There is no cure and it has to run its course. It is known that some forms of the disease are infectious. Birds are most susceptible when they are youngest.

The above refers to fowls, but is it possible that native birds can contract this disease? It could explain the mystery surrounding the death of our little willy wagtail.

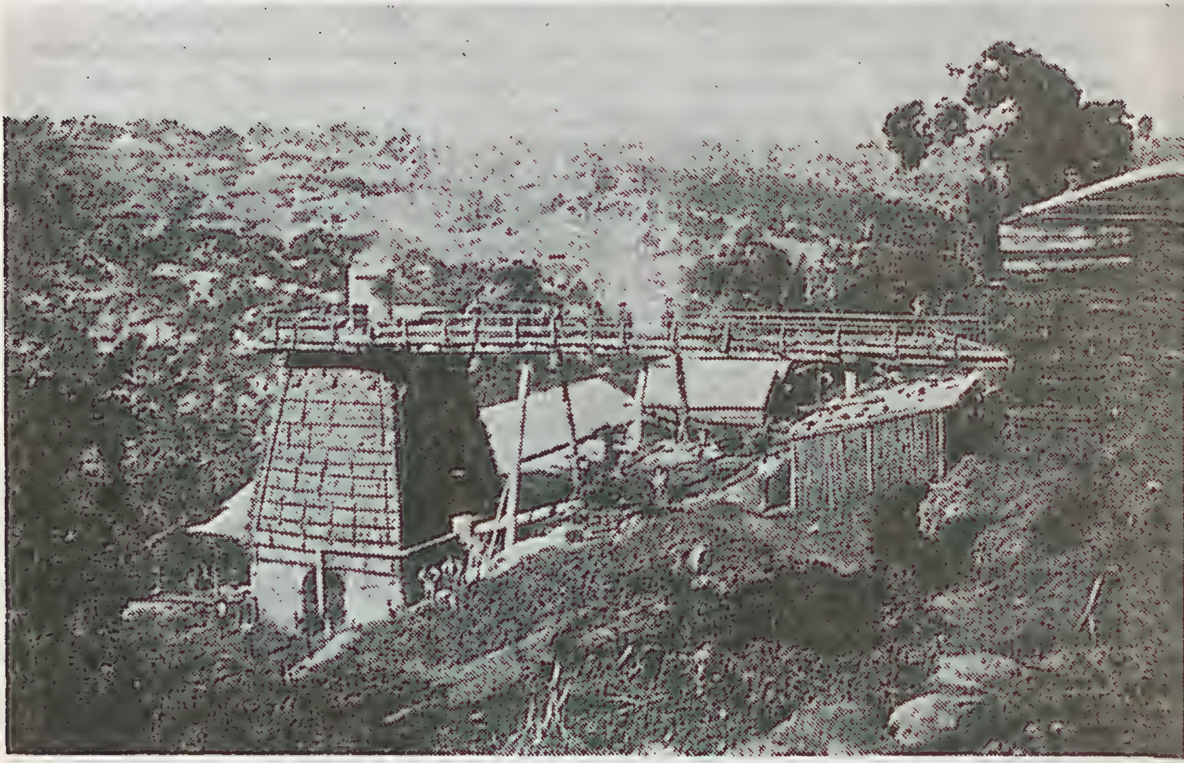
* * *

CORRECTION:
The excellent drawing shown on page 22 of the last issue was by MARGOT PEDERSON and not as credited; the Editor apologises for this error.

* * *

CLUB EXCURSION TO HISTORIC LAL LAL

By Jack Wheeler, Excursion Secretary



Iron Smelting Furnace, Lal Lal, 1882.

Mines Department Photograph.

Two large buses were necessary to transport members, their families and friends to Lal Lal, 15 miles south-east of Ballarat, for our April excursion. Several private cars also attended.

Approaching Meredith four members reported seeing brolgas (native companions) approximately a quarter of a mile off the highway and a little further on, all had excellent views of a large dark coloured wedge-tailed eagle soaring close to the highway.

CLUB EXCURSION TO HISTORIC LAL LAL (Cont'd.)

At Clarendon, the Lal Lal road branches east from the highway, and soon we are in attractive bush country. Approaching Lal Lal where the Ballarat-Geelong railway is crossed, flocks of crimson rosellas and several grey currawongs were seen. The station buildings at Lal Lal are a fine example of blue-stone architecture of the early era.

One mile past Lal Lal our first stop was made on the Lal Lal Fall's road, to view the nearby clay pit and examine specimens from road-side storage deposits. Operated by the Ballarat Paper Mills, the kaolin clay is refined and used as a filler for high-grade refined paper.

The pit or quarry revealed large deposits of kaolinised Devonian granite which was due to deep weathering during the hotter and more humid phases of the Quaternary climate. Examining some of the quarried material it revealed the texture and appearance of the original granite but consisted of kaolin (china-clay), quartz, and mica, all the original feldspar of the granite having been converted to kaolin.

Tests carried out by the Mines Department, (memoir 18), revealed that the quality of this clay as being excellent. It does however, contain potassium vanadate, which can produce a yellow discoloration on burnt ware when exposed to atmospheric conditions.

On arriving at the Lal Lal Falls picnic ground a little further on, members assembled for an inspection of the falls area and the gorge immediately below. A well graded track guided the party down into the gorge itself, and it was disappointing that due to severe drought conditions,the stream was completely dry. The fall's drop is 110 feet, and when the stream is flowing, the falls are quite spectacular.

The gorge had been formed over the centuries, by the water flow and the undercutting Newer Volcanic basalt flows. Here is evidence of two separate flows, the lower thicker flow showing coarse columnar jointing, while the upper and thinner flow shows finer jointing. Approximately half way down the gorge pathway, can be seen vesicular basalt, glassy basalt (tachylyte) and limonite.

CLUB EXCURSION TO HISTORIC LAL LAL (Cont'd.)

The gorge track led down to the falls basin which, despite the lack of water-flow, had maintained its level. Several welcome swallows were noticed hawking insects in this region, and also noted were three welcome swallow nests in rock crevices some twenty feet above the basin.

Vegetation of interest here was blanket fern (Pleurosorus rutifolius), tree violet (Hymenanthera dentata), and an exotic plant with large velvet-like foliage,woolly mullein (Verbascum thapsus). Along the sheltered cliff-face, several late flowering blue-bells were still in flower.

Moving out of the gorge and around to the top of the falls, an area where 'nardoo' is usually very abundant, a search revealed only an odd plant. Further up-stream, members were taken to see a group of very bedraggled 'Austral anchor plants' (Discaria australis). Unfortunately someone had made an attempt to burn out the plants, and despite being badly damaged, appeared to be shooting strongly.

During lunch several flame robins were noted. Several skinks sp. were found by boys of our group. After lunch our buses transported us three miles to the east of Lal Lal down a very steep and windy track to the historic 'iron mine'.

The site of the mine is in thickly timbered eucalypt forest high on a ridge overlooking the Moorabool River. This area had suffered a bad fire some months ago and the foliage was just recovering with fresh green shoots.

It was here that in 1873, the Lal Lal Iron Mining Company commenced operations with a capital of £10,000, and the iron ore deposits quarried and smelted, transported to Ballarat foundaries.

The ore, a bog-iron ore, composed of limonite, resulting from the deposition of hydrated iron oxide produced by the decomposition of the Newer Volcanic basalts - moderately extensive and recent estimates indicate two million tons of ore 49% iron (surface grade), and 10% silica and alumina - hardly sufficient and worthwhile for mining these modern times.

The first blast furnace was built in 1874, and by early 1876, 110 tons of pig iron had been produced. The company manager was Mr. E.H.L. Swofte.

CLUB EXCURSION TO HISTORIC LAL LAL (Cont'd.)

For the furnace, charcoal was obtained from local eucalypt forest, whilst limestone was transported from Geelong.

By 1877, the plant was capable of handling 70 tons of iron weekly, and during it's first three years of operation, 518 tons of ore was mined, and 237 tons of pig iron of several varieties produced, which included mottled and white iron of low silicon content and being used mainly for the manufacture of stamping batteries for the then flourishing gold mining industry.

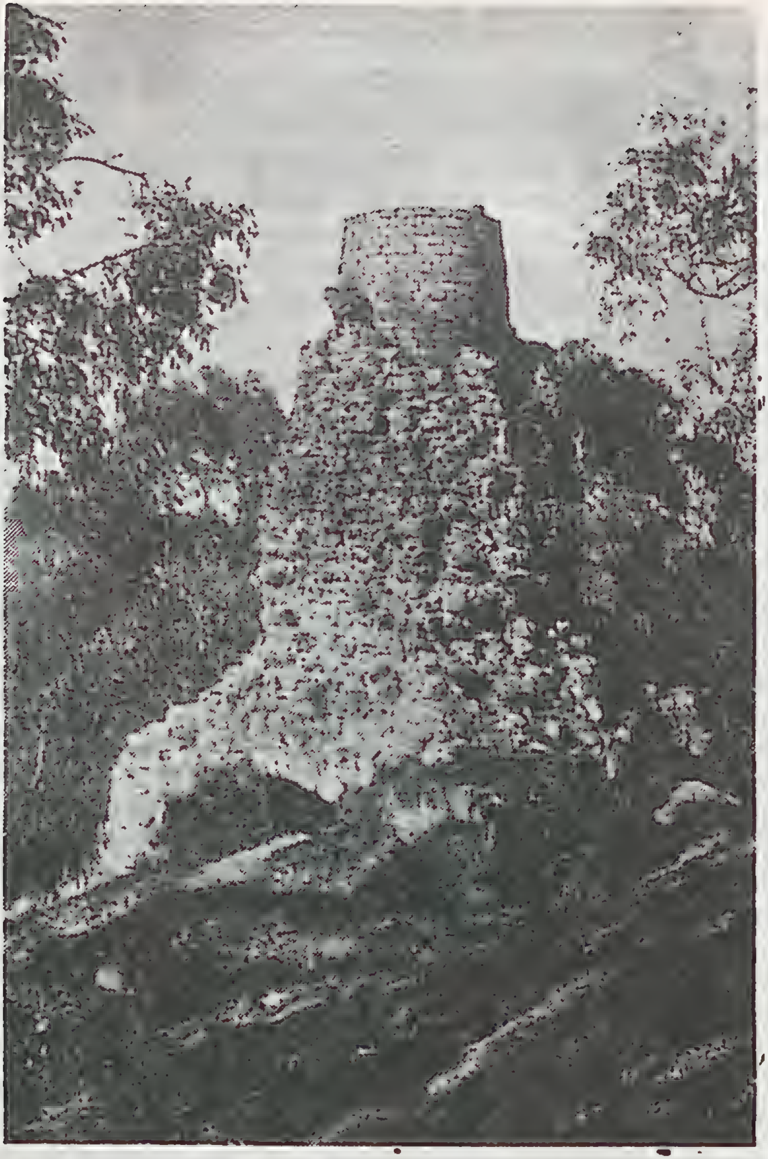
It was in 1879 that the John Walker's Union Foundry of Ballarat used iron from Lal Lal to cast the iron fence still standing around St. Patrick's Cathedral of Ballarat.

During 1880, a larger blast furnace, the one still standing, was built and even today the firebricks imported from England, bear the stamp of Pearson's of Stourbridge.

This Lal Lal company suddenly collapsed in 1884, after reaching a stage of peak production of 1600 tons of ore smelted and 800 tons of pig-iron. Competition of imported English produced iron which sold at £4.10.- per ton as compared with the price of £10.-.- per ton for the local product, soon affected trade and the market for Lal Lal pig-iron slumped badly. As a counter to this, Lal Lal commenced casting activities which proved to be in competition to the foundaries which had previously supported them. This resulted in a boycott from the Ballarat foundaries, and the Lal Lal Company closed down and plant and equipment was sold.

Today, the finely preserved blast furnace is a fitting monument of historical importance to the pioneering of the early days of settlement. In the near future it will witness further great activity immediately below as the new Bungal reservoir takes shape for the storage of the Moorabool's water to supply Ballarat and Geelong. It is to be hoped that the Ballarat Historical Society which is so vitally interested in the preservation of the mine area and the furnace, will be successful in having it's plans implemented.

By mid-afternoon on the day of our visit, steady rain had set in, and our departure from this interesting area had to be hurriedly terminated and the buses travelled back to Geelong via Mt. Doran, Durdidwarrah and Anakie. This was a pleasant climax to an interesting and memorable excursion.
Leaders: Stan Rowe and Jack Wheeler.



Ruins of Iron Furnace, Lal Lal, 1908.

Photographs in this article by courtesy of Mines Department.

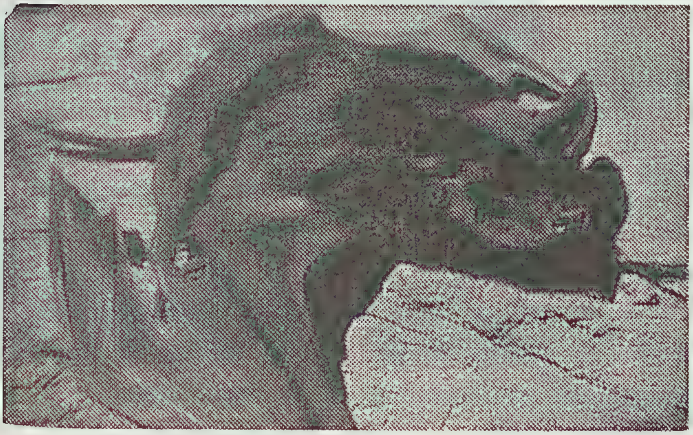
AT RANDOM

WHITE-STRIPED BAT (Nyctonomus australis): by I.R. McCann, Stawell.

On 15th February, 1964, Mr. F. Stewart who has a property near Fyans Creek to the west of Stawell brought me a fine specimen of the White-striped Bat.

He had fallen a large Red Gum on his property and about thirty of these bats spilled out of a hollow in the trunk near the top when the tree fell and the trunk broke. About a dozen flew away but the remainder stayed scurrying about on the ground. He stated that wherever he stood the bats made straight towards him.

The Bat which he brought to me was a rich red-brown in colour with a wrinkled upper lip, a pig-like snout, a gular sack and a pure white stripe on each side of the ventral surface extending from the arm to the thigh. The tail was long and thick and extended well beyond the edge of the uropatagium.



White-striped Bat
Photo by Ian McCann.

Editors Note:

One of this species was found at Mannerim in January, 1965.

AT RANDOM (Cont'd.)

TREE-CREEPER BATHING: by Ellen M. McCulloch, Mitcham.

Not a great deal seems to be recorded on the behaviour patterns different birds exhibit when bathing. I recently saw a White-throated Tree-Creeper (Climacteris leucophaea) bathing in a road-side dam near Walhalla. The dam was about 10 feet wide by 20 feet long, 4 inches deep in the centre.

I don't know why I expected the bird to dash in and out of the wate like a honeyeater. Instead it flew down to the edge where the wate was one inch deep, squatted there, and bathed vigorously with feathers fluffed out, showing the beautifully delicate breast markings very distinctly. It dipped its head right underneath the water surface, and with wings beating vigorously showered water over itself. It then flew to a tree-trunk, landing 6 feet from the base and clung there, shook its feathers, preened a little, then flew back to the same spot in the water. It bathed again in the same manner, with the head feathers so wet that they stuck together like a crest. It flew up again to the same spot on the tree and shook itself very hard, with the body swinging out from the tree-trunk, to which it was clinging with those enormous feet. It then flew back to the same place in the water, squatted again, and was bathing when a passing car caused it to fly off into the forest.

From the light rather hesitant 'pink-pink-pink' calls repeated each time the bird was bathing, I had the impression that it was immature. It had no red eye-mark.

BIRDS AT PARAPARAP: by John Hunt, Paraparap.

Our summer house lived up to its name Terrigal (aboriginal for Place of Little Birds) one recent Sunday afternoon when the following birds were observed from our garden:-

14 Wattlebirds, 11 Gang-gangs, 2 Mudlarks, 2 Grey thrushes, 1 Eastern Spinebill, 2 female Flame Robins, White-plumed Honeyeater numerous Blue Wrens, several Swifts, numerous Goldfinches, 2 White-faced Herons, several Magpies, 2 Kookaburras, 5 Rosellas, 2 Wag-tails, 6 Redback Parrots, as well as the usual Swallows, Sparrows, Starlings and a Raven.

Junior Pages

Spider Orchid

Photo by Geoff Gayner

ORCHIDS:

As promised in the Junior Pages of our last issue, we will have a look at those wonderful little plants, the Orchids, to find out a little of their habits and life.

Orchid flowers are usually beautifully shaped and colored, and a wide variety of types makes it hard to describe the various parts of the flowers; there are six "petals", using the word petal in a general sense, and the different families of orchids have the petals grouped differently.

In each case, however, one petal is very different from the other five, and it is called the tongue or labellum; the remaining five may be in groups of two and three, four and one, or all five may be alike.

The greenhoods have three petals forming the hood, two appearing as "ears", and the sixth as a tongue; with the "pink fingers", there are four alike in front, and one behind the tongue. Each group of orchids seems to have its own arrangement of petals.

JUNIOR PAGES (Cont'd.)

In addition, the pistil and stamens are not separated as in most flowers, but are combined; and these too are often beautifully shaped and coloured.

Orchids produce very large numbers of seeds, but these germinate and grow only with the assistance of a type of fungus; so vast is the number of seeds that if all grew, we would soon be overrun with orchids!

It is virtually impossible to grow orchids in cultivation from seeds, and most orchid growers rely on multiplication of the bulbs or tubers from which the plants grow, to increase their number of plants

Have you noticed how a bean seed grows - the first growth is a pair of thick, fleshy leaves? Orchids, along with grasses (wheat for example) and some other plants have only one seed-leaf - botanists call these plants monocotyledons, a word which means "one seed leaf".

What else do you know about orchids? Examine the flowers that are on display at nearly every meeting or excursion, to see if you can notice these features of them - the different petals, the labellum or tongue, the seed cases perhaps, and if possible the leaf that first grows from the tuber.

They are, after all, the most popular flower we have.

* * *

In the next issue, we will have some notes on reptiles - what can you tell me about lizards and snakes you may have seen?

Remember - we need your notes to fill these pages too. It is up to you to show that you are interested in these pages.

* * *

Have you found your first birds' nest this season yet? Plovers, Ravens and Magpies should all be nesting by now - have you seen any nests this year?

* * *

REMEMBER - Junior Lectures are held at 7.30p.m. prior to each General Meeting which is held at McPhillimy Hall, Latrobe Terrace, Geelong, on the first Tuesday of each month.

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

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COVER PHOTOGRAPH:

Thick-tailed Gecko of the Mallee

by Trevor Pescott.

GEELONG NATURALIST

Vol.5. No.3. October 1968.

EDITORIAL

There is probably no end to the problems facing conservationists in their attempts to see permanently preserved adequate lands as National Parks. But the one, single solution most urgently sought overall is education - of the general public, the school children, land owners and most of all the people with "influence".

Latterly, the Little Desert and Lower Glenelg proposals have been of paramount interest, and the remarks of a former Portland resident who has spent a lifetime in politics and land development reflect just how hard it is to put forward an argument which would sway a dyed-in-the-wool anti-conservationist.

He is not, he said, against National Parks. But why ask for 48000 acres as is the case on the Lower Glenelg? There is much potentially good agricultural land there - why not develop that? The other land, useless for agriculture - make that a Park! You don't need that much land.

He was thoroughly outraged at the suggestion that good land should also be preserved as a Park.

The Kentbruck Heath would be ideal for farming land after it is drained - and there is nothing worth preserving there, so he believed. What of the Swamp Greenhood, the Spiranthes orchid, the Swamp parrot? You're way above my head with those names, he said. What good are they ......

Just how can you convince someone who will not concede any points?

We all know that land can not remain idle for ever, but National Parks are not idle - there are many reasons to justify their existance; they are justified even in light of the horrifying warnings of our population explosions. After all, another few per cent of arrable land will not solve a food shortage as dire as our seers predict - and even if all our National Parks needs were given, it would hardly exceed that few per cent of the State's area.

TREVOR PESCOTT,

Hon. Editor.

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803

By C.J. Gibson, Belmont.

The legendary "wild white man" did really live, and lived in Geelong for thirty two years with the aborigines before other European settlers arrived.

The story of William Buckley, that 'wild white man', is an extraordinar one; one that will particularly delight those with the slightest interest in Geelong, aborigines, or both, and especially, of course, those seeking some knowledge of the aborigines in Geelong.

This brief note is not to recite that story for it has been well told by the journalist, John Morgan in 1852, and is now, thankfully, readily available to present day readers because of the efforts of another journalist, Charles Edward Sayers, who has recently edited the work published by William Heinemann Ltd. in 1967. The purpose of this present note is, rather, to complement such story by way of an introduction thereto and a guide to aid the reader in following the narrative as far as the places visited on his initial walkabout are concerned.

The facts that William Buckley, a former bricklayer and soldier had been brought to Port Phillip as an assisted migrant - in those days compulsorily so because of a conviction for receiving stolen goods; had escaped from the settlement near Sorrento and lived with the aborigines as one of them in Geelong for thirty two years; had joined the first permanent settlement in Melbourne; and finally had lived the closing years of his life in Tasmania, are all fairly well known incidents of his story. There are, however, some details of his walkabout to and around Geelong that are not quite so well known, and many aspects will never be known, but some that are of interest emerge from a search of the material available.

On, or very soon after, October 10 (1803) Buckley was landed near Sorrento where he camped with the other convicts and settlers and worked on the erection of the first public buildings - a magazine and a storehouse.

On December 27 at about 9 p.m. Buckley with some companions escaped and thereby commenced the now famous adventures and walkabout to

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

Geelong. After running for the first three or four hours they rested and then pushed on again until they came to a river where they rested until daylight. This was probably the Mordialloc Creek about forty miles distance - a fair distance to travel at night in unknown bush country. It is possible that they covered about twenty five to thirty miles while running and thereafter the remaining ten to fifteen miles in the three or four hours before sunrise allowing a little, but very little, time for the rests referred to. If this was so they certainly had placed a considerable distance between themselves and the camp settlement and would have little fear of being pursued.

Then it would seem from the narrative that they crossed the river and marched to within twenty miles of the present site of Melbourne. However the Mordialloc is slightly less than twenty miles from Melbourne and it could be that either Buckley's memory was failing - and we must make allowance for the fact that this story was being told almost fifty years after the event - or that Morgan's story was faulty - and in this respect we should recall his plea;
"I beg those who may think this, to understand, that the Hero of these adventures can neither read nor write, and, that consequently I have had the laborious task of connecting circumstances together (so as to make them intelligible) from rough notes and memoranda, made at various times, and by conversations, noting the points down in the shape of questions and answers, as I went on." (1)

From this then, perhaps, we could consider the first night's flight to have ended at Balcolms Creek near Mornington and about twenty miles from the camp settlement. This would then allow for the first day's march ending "about twenty miles distant to what is now the city of Melbourne", namely, the Mordialloc Creek. However Buckley refers to the river as 'Darkee Barwin' which is unequivocally rendered 'Moordy-Yallock' and interpreted 'Mordialloc' by Sayers. (2) We could readily accept this interpretation if we were to read. "that night (the second night) we reached to about twenty miles distant to (instead of from) what is now the city of Melbourne.....", that is, twenty miles distant from the Mordialloc Creek.

Accepting this construction as feasible and quite reasonable we would then find Buckley's small party taking an early morning swim

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

in the Yarra and passing over extensive plains on the third day (December 29) to reach the You Yang hills. There they spent the night and no doubt climbed Station Peak to view the surrounding country - as did Mathew Flinders just eighteen months previously (viz. May 1, 1803). (3) Having obtained their bearings as it were and exhausted their food supply they headed directly for the bay, or, more specifically, the beach, to look for food. It appears that they were successful and found shell fish and a fresh water well at Corio where they rested that night.

The next day (December 31) they continued their journey around the bay and would have walked along Rippleside, Western Beach, Eastern Beach, Stingaree Bay and on around Point Henry - that is, through the areas now covered by the present Port and City of Geelong - thus arriving in or, rather, passing through Geelong on the last day of 1803. They continued on to a place the natives called Woodela signifying rock. This place must have been somewhere between Geelong and Swan Island (Barwal) their next overnight stop but I can't suggest where this rock was unless it was at or near Clifton Springs as Sayers suggests. (4) There are cliffs and rises along sections of this foreshore, although I don't know of any prominent rocks.

At Barwal (Swan Island) he says they remained 'six more days', that is, after 'several' days already spent there recovering strength and, incidentally, attempting to signal the ship that lay across the bay near Sorrento. His companions' New Year resolutions were to return and on about January 11 set out.

Buckley determined, however, to continue alone, and immediately set off - travelling across to where Queenscliff is now and then on around the coast travelling mainly along the beach to Barwon Heads, Breamlea (Karaaf), Torquay (Doorangwar), Anglesea (Kuarka Dorla) and as far as Aireys Inlet (Mangowak), as shown on the accompanying map.

The itinerary so far appears reasonably accurate as far as the time schedule and the places visited are concerned. It would seem that he arrived at Aireys Inlet about January 15 to 18 after almost three

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

weeks of such an exhausting walkabout, the last three days of which were without food or water, and crawled up the beach all but completely exhausted. "At this spot", he says he, "remained more than a week, perhaps it may have been two or three, for I seem henceforth to have lost all record of time, except by the return of the seasons, and the rising and setting sun". (5) Hereafter speculation on where and when he continued his walkabout increases. In fact the best I can attempt to do is to merely suggest places he might have visited from the descriptions he gives.

On resuming his journey he mentions coming to a large rock (called by the natives Nooraki) in two days. Sayers suggests (6) that this was Mt. Defiance which is about six miles beyond Lorne and something like twenty miles from Aireys Inlet - a rather long step in two days for a man in Buckley's weakened condition. We must not, however, accept the 'two days' without question but it could very well be correct if we consider his description more closely. He describes a large rock "about a mile long .... sheltered by high overhanging land, so that the sun seldom shines upon it" (7) and this, to me, sounds more like Big Hill which is about five miles beyond Aireys Inlet. Although he had been travelling about five miles per day after leaving his companions this part of the coast is much more rugged with rather more cliffs than sandy beaches, and would mean slower progress.

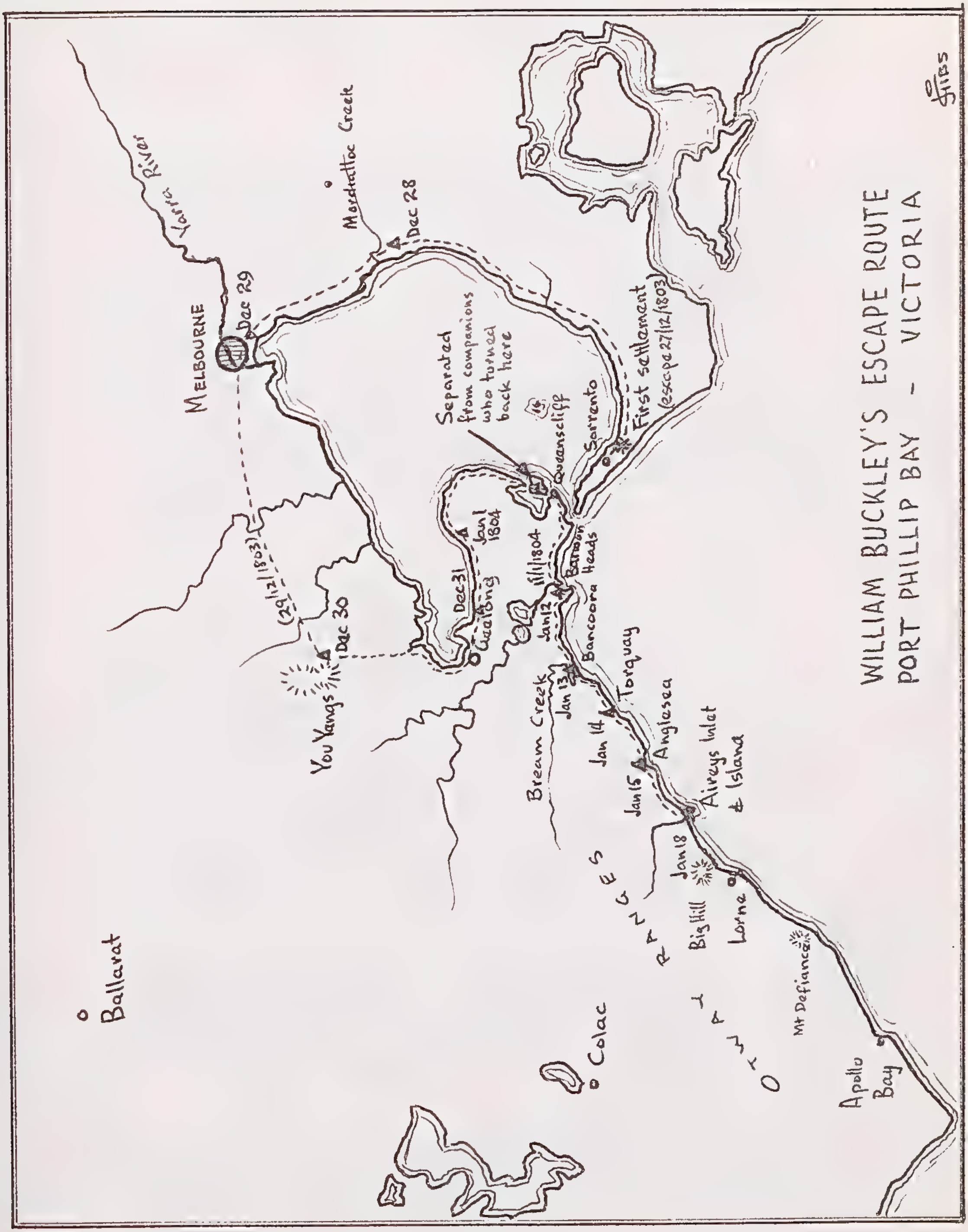
Here we may have to excuse him as he requests "if I omit to place any very precise details in their particular order ..... because so many years wanderings must have impaired my recollection - except as to the more prominent and material incidents of my life". (8) Already we observe the necessity to excuse him for after leaving Breamlea (Karaaf) he says, "continuing along the beach, I reached the Doorangwar River (Spring Creek, Torquay)...... I had avoided going into the bush as much as possible, although compelled occasionally to leave the beach, in order to ford the rivers I had met with on my journey." (9) Since there are no rivers between Breamlea and Torquay and a fine beach all the way which I have myself several times hiked we must assume that this reference was to rivers in some other sections of his walkabout and quite possibly those sections further down the coast around Aireys Inlet where many streams from the Otway Ranges enter the sea.

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

On the other hand, perhaps, we can accept his statement as a fair account of the facts if we accept Big Hill as Nooraki. After all he remained here several months and would surely remember this place as well as almost any other he visited and his description is sufficiently clear to suggest such an interpretation. Again this particular place would no doubt appear vividly in his recollections because of the episode with the three natives who rather forcibly took him inland to their huts somewhere in the Otway Ranges. He left them to return to the sea coast which he made without difficulty - perhaps because he followed a ridge or a stream down to the coast where he observes a 'small rocky island'. As the only islands now known along this part of the coast are Eagle Rock and Table Rock both at Aireys Inlet we must presume this to have been the place he had returned to - unless perchance some islands then existing have since been reduced to sea level.

We might pause to wonder whether he saw these islands on his first journey down the coast for he must have passed this way yet made no reference to any islands. Could it be that he omitted reference to them, or passed inland to avoid the cliffs of this headland and therefore did not see them, or that he was now further along the coast around Lorne instead of back at Aireys Inlet as I have suggested?

I still consider it probable that he was taking excursions around Aireys Inlet and the subsequent walkabouts would seem, to me, to confirm this interpretation. He appears to have taken another excursion into the forests of the Otway Ranges for some days and become lost. After finding a large lake he followed a river from it to the sea and the 'little rocky island' previously mentioned. I can't locate any such lake on the Aireys (or, Painkalac) Creek although it is possible that this or other rivers had such a lake for land slides have occured in these hills to form lakes of a more or less temporary nature in some of these river valleys. Whether or not he followed the Aireys, the river he did follow would seem to have entered the sea near the little rocky island and, also, that this was "not far from my old quarters where the three natives had left me". (10) He then says that he remained at his 'own hut on the beach' for 'many months' and it does seem reasonably certain that all these places were within the same



WILLIAM BUCKLEY'S ESCAPE ROUTE
PORT PHILLIP BAY - VICTORIA

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

general locality - an area he must have come to know very well.

Some four to five months after his escape,winter was noticed to be approaching and he decided to return to the ship and consequently heads back along the coast he had come. The first place he refers to is Dodangawn (Torquay) reached after several days journey of 'short distances' and then the next day the Karaaf (Breamlea). Surely if he had been beyond Aireys Inlet - down near Lorne for instance - he could hardly fail to pass through Aireys Inlet. Nor is it very likely he would omit reference to it when all others are referred to specifically. All these places must have become familiar to him during later walkabouts with the aborigines - obviously so for him to have learned their aboriginal names - and we can safely assume that he knew well their location too. The only possible excuse then would seem to be Morgan's omission but it is not necessary to argue this if we accept that Buckley had his 'quarters' and 'hut' at or near Aireys Inlet which I am suggesting here.

After Breamlea he continued on to Marmart which appears to be just west of Barwon Heads as Sayers suggests and here met with the native tribe that befriended him and with whom he lived until Batman's party arrived at Indented Heads in August 1835. His escape had become an accomplished fact and his first walkabout to Geelong had been completed. He seems to have lived peacably with the Geelong aborigines thoroughly acquiring their habits and joining their numerous walkabouts around the district but all that is another story - told by Morgan elsewhere as referrred to above, and for detail see 'references' below.

References:

1. Morgan, J., The Life and Adventures of William Buckley, Archibald MacDougall, Hobart 1852 and republished by Sayers, C.E. (Ed.), William Heinemann Ltd. Melbourne, 1967. Preface p.xviii.

2. Ibid. p.13, footnote 8.

3. See Gibson, C.J., "Flinders Peak", Geelong Naturalist, Vol.4, No.3, October, 1967, p.82.

WILLIAM BUCKLEY'S WALKABOUT TO GEELONG IN 1803 (Cont'd.)

4. Morgan, J., - Sayers, C.E. (Ed.) op.cit., p.14, footnote 12.
5. Ibid. p.11.
6. Ibid. p.14, footnote 22.
7. Ibid. pp.11 & 12.
8. Ibid. p.11.
9. Ibid. p.9.
10. Ibid. p.18.

Refer also: Curr, E., The Australian Race, Government Printer, Melbourne, 1886.

Brownhill, W.R., The History of Geelong and Corio Bay, Wilke & Coy., Melbourne, 1955.

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BRISBANE RANGES MAMMALS

By T. Pescott, Belmont

Recently, the Mammal Survey Group of the F.N.C.V. spent a weekend in the Brisbane Ranges, with about 70 box traps to catch alive small terrestrial mammals. However, the only mammal caught was a Stuart's (Brown) Phascogale, and speculation rose why there are so few small animals in the bushland near Durdidwarrah.

As far as I can find out, there are very few mammals in this part of the Ranges - apart from the Grey Kangaroo, Black Wallaby, Echidna, Koala, Silver-grey possum, Ring-tailed Possum and Sugar Glider, all of which are now quite common. The Moorabool River produces the Platypus, and in the Reservoirs Water rats are not uncommon; bats of two species have been found at Steiglitz.

Several years ago, Mr. Boardman brought into a G.F.N.C. meeting a piece of fur, identified subsequently as the Brush-tailed Phascogale, and later one was seen by Mr. B. Cooke during a spotlight excursion.

So the list at present shows only 13 species of native mammal, and of course we should add to this House mouse, Black rat, Fox, Rabbit, Hare and Red Deer (extinct about 1930, subsequently released again near Twin Lakes?)

THE PELICANS DID NOT BREED AGAIN

By J.R. Wheeler, Belmont.

Whilst the parent birds are away feeding, young pelicans congregate in nurseries with just a few adults to protect them.
Lake Hindmarsh January 1967.
Photo by J.R. Wheeler.

The season 1966/67 was a 'red letter day' for the world of pelicans here in Victoria, rarely had such large numbers bred and never before had it been known for pelicans to breed in the far north-west Wimmera.

Now, in the season just concluded 1967/68, drought conditions intervened and our hopes of a further breeding period at this same locality were dashed.

To confirm that no breeding did take place, a landrover supplied by Mr. Doug Schuman of Detpur conveyed me over the areas frequented by pelicans and the very dry lake bed resulting from the fast

THE PELICANS DID NOT BREED AGAIN (Cont'd.)

receding waters of Lake Hindmarsh, immediately to the west of Jeparit in the western part of this State.

Time permitted the taking of a census of the birdlife then on Lake Hindmarsh. The total tally revealed that 1309 pelicans were still resident there, and despite the shallow nature of the lake level, sufficient food was still available for their feeding requirements. This revealed that the pelican population had declined by a little over 50% since the breeding season of 1966/67, which was then made up of adults 2,000 and young reared 800, a total of 2,800.

During the first ten to twelve days, very young pelicans are protected from the hot sun and cold winds by the parent bird standing over them. This is a most important stage for their survival.

Lake Hindmarsh January 1967.

Photo by J.R. Wheeler.

THE PELICANS DID NOT BREED AGAIN (Cont'd.)

Pelican rookeries in southern Australia are not plentiful. The once large rookery on the Coorong in south-east South Australia has almost been wiped out by the constant predation by intolerant fishermen, the rookery at Menindie, western New South Wales disappeared following increased water storage levels. A small rookery does exist on Lake Corangamite in south-western Victoria. No previous breeding for the Wimmera region, as far as I know, has ever been recorded.

Breeding for the pelican evolves around protection and food supply. So it was, that during November 1966, the breeding scouts of the pelicans led their numbers to Lake Hindmarsh, to a chosen site, a small sand bar of no more than ten acres situated just off shore in the north-western section of this vast expanse of water. The region appeared safe from human interference, (this was not so however), shallow water gave it reasonable protection from brer fox, and nearby Lake Albacutya which was drying out fast, was an assured food supply.

Such large flotillas of these graceful fliers had never before been known for Lake Hindmarsh. Flocks of thirty or forty birds were regular but never in hundreds. Mr. Jack Helyer, a farmer living nearby, became so interested in this large flock that early in December he decided to investigate the sand spit where they regularly congregated. To his surprise, he found that an area of the spit was littered with hundreds of crudely made nests and that most contained two eggs, whilst only odd nests contained three.

Mr. Helyer kept his find a closely guarded secret, but when the holiday makers that throng Lake Hindmarsh during the holiday season, for fishing and swimming, came at Christmas, word soon got around that the pelicans were breeding in their hundreds. This started a rush to see and photograph the birds. The breeding sand spit was not easily reached by road owing to the intervening sand ridges. Many made the trip by speed boats. People wandered through the rookery with little regard for the welfare of the newly hatched chicks and keeping the birds off eggs for long periods.

The young of the pelican when hatched is completely naked and the first two weeks during which time it received its white downy coat,

THE PELICANS DID NOT BREED AGAIN (Cont'd.)

cold wind and hot sun exposure can take heavy toll. Children were allowed to gather chicks for photography purposes, many had armfuls of babies and many were not returned to proper nests, and even dogs allowed to scamper amongst the birds. This human interference almost spelt disaster to the success of the rookery, until the local Chamber of Commerce after conferring with the Fisheries and Wildlife Department, erected signs asking the visiting public to not wander through the rookery but to observe and photograph the birds from a safe distance.

As far as is known the public then co-operated and further drastic interference stopped. Then, with the approaching 'duck opening', members of the Bird Observers Club well remember 1961, when at Lake Corangamite during an open season for Black Swans, pelicans breeding were disturbed and so upset by local shooters that they promptly deserted and left eggs and young to perish and rot in the sun. An approach to the Fisheries and Wildlife Department was successful in having officers posted at Jeparit to warn shooters from the rookery area. This proved successful and the rookery finished up with a total of at least 800 young successfully reared. This was a 60% successful breeding which was much more than was at first anticipated. A visit to the rookery after breeding had concluded indicated the remains of dead reasonably light.

Lake Hindmarsh is dependant on the flooding of the Wimmera River for its water level, and even though not yet dry, could dry out this next summer unless sufficient rains come to assure a flooding of the Wimmera River. Until the lake returns to its normal high level, and that overflow empties into Lake Albacutya and the supply of its fish replenishes, I can see no further breeding of the pelican in that region.

* * * * * * *

MATERIAL FOR "GEELONG NATURALIST" REQUIRED

The Editor is always in need of articles about natural history, and black-and-white photographs preferably glossy prints about half-page size. Copy should be sent to -

Hon. Editor, "Geelong Naturalist", 4 Victoria Terrace,
Belmont, 3216.

FLINDERS ISLAND

By Adrian Davey, Newtown.

The only sound was of the seagulls. Out into the still bay a couple of dinghys rode quietly above their soft reflections. The long yellow bay stretched away from my log of driftwood out onto the point. A faint pink glow had appeared out over the islands and soon the sun would appear. A lonely fishing boat nosed out from behind the point and on down the sound. I sat and waited for the dawn. It was worth waiting for.

Two weeks earlier I had stepped off a plane into a stiff breeze on the airfield at Whitemark. Ever since, I had been able to marvel at the sights of the islands and get to know many of the friendly people of these islands. The Furneaux Group of which Flinders Island is the largest, lies off the north-east tip of Tasmania. The islands are right in the teeth of the winds, and one never loses the feeling of closeness to the sea - nowhere on Flinders Island can one be more than about ten miles from the sea. Fifteen hundred people live in the group, mainly on Flinders Island. Most are pastoralists - there is a soldier settlement scheme in operation - but as well there are a significant group of fishermen and quite a few people living on the smaller outlying islands, Cape Barren Island in particular. On Cape Barren Island there are some one hundred people descended from sealers and aborigines - remnants of a colourful history.

Flinders and Bass were led to discover the group after the wreck there in 1797 of the "Sydney Cove". Some one hundred and twenty ships have followed the "Sydney Cove" to a watery grave in these waters since then. Even today, the "Farsund", decaying and battered, rests aground on the sands of the Vansittart shoals, facing out to sea as it has since running aground in 1912. Sealers lived on some of the islands from 1798 and the first pastoral leases were taken out in 1848. The island waters, treacherous as they were, supported a large number of sealers, and it was these sealers that, taking aboriginal wives from Tasmania and the mainland, started the hybrid race present today as the Cape Barren Islanders. One particularly interesting incident in the turbulent history of the islands was the establishment of a community of Tasmanian aborigines, in 1835, at Settlement Point on Flinders

FLINDERS ISLAND (Cont'd.)

Island, by George Augustus Robinson. These natives, the last of the Tasmanians, slowly died out.

Today, all the islands are steeped in history. Many of the homes hold unusual historic relics,and remnants of a romantic era linger on in place names like Tin Kettle Island, Guncarriage Island, Great Dog Island, and Prime Seal Island. These days the outer islands are mainly devoted to sheep and cattle, but in the past they were hives of industry, as the islanders went "birding". The Short-tailed Shearwater, or Muttonbird, was a big export from the area, and even now is an island delicacy.

Now, instead of swashbuckling sealers and escaped convicts, the island people are industrious, and above all, particularly friendly. Whitemark, on the west coast of Flinders Island is the administrative centre and has the only hotel and commercial airfield. The only other significant settlement on the island is Lady Barron, a fishing community in the south. From Lady Barron the fishermen put out into beautiful Franklin Sound and fish the waters among the tangled islands and islets for crayfish. Some fishermen also operate from Whitemark, or from Killecrankie and Palana in the north, but the only good harbour is Lady Barron.

What brought me, a young Victorian, to be sitting on a beach at dawn on a lovely island? In short - fascination. From the moment I stepped ashore and set about getting a job, the excitement of the place ran high in my veins. I spent a few days exploring the lonely beaches near Settlement Point, and I wandered among the old tin mines of Mt. Tannu, and dug topaz from the creek beds. I visited the outer islands on the police boat "Aralla", and sailed many of the waters with fishermen. Getting ashore on a lonely, rocky, windswept island can be a tricky business in a heavy swell. I spent a day walking across Cape Barren Island, and staring out at the rough seas from its lonely slopes. I lived and worked as an islander. I got a job in Lady Barron with the Tasmanian Transport Commission at the superphosphate store near the jetty. All supplies have to be brought in by sea or air, and most heavy cargo comes to Lady Barron because, although some delightful ships do unload at Whitemark, the tide there goes out so far that

FLINDERS ISLAND (Cont'd.)

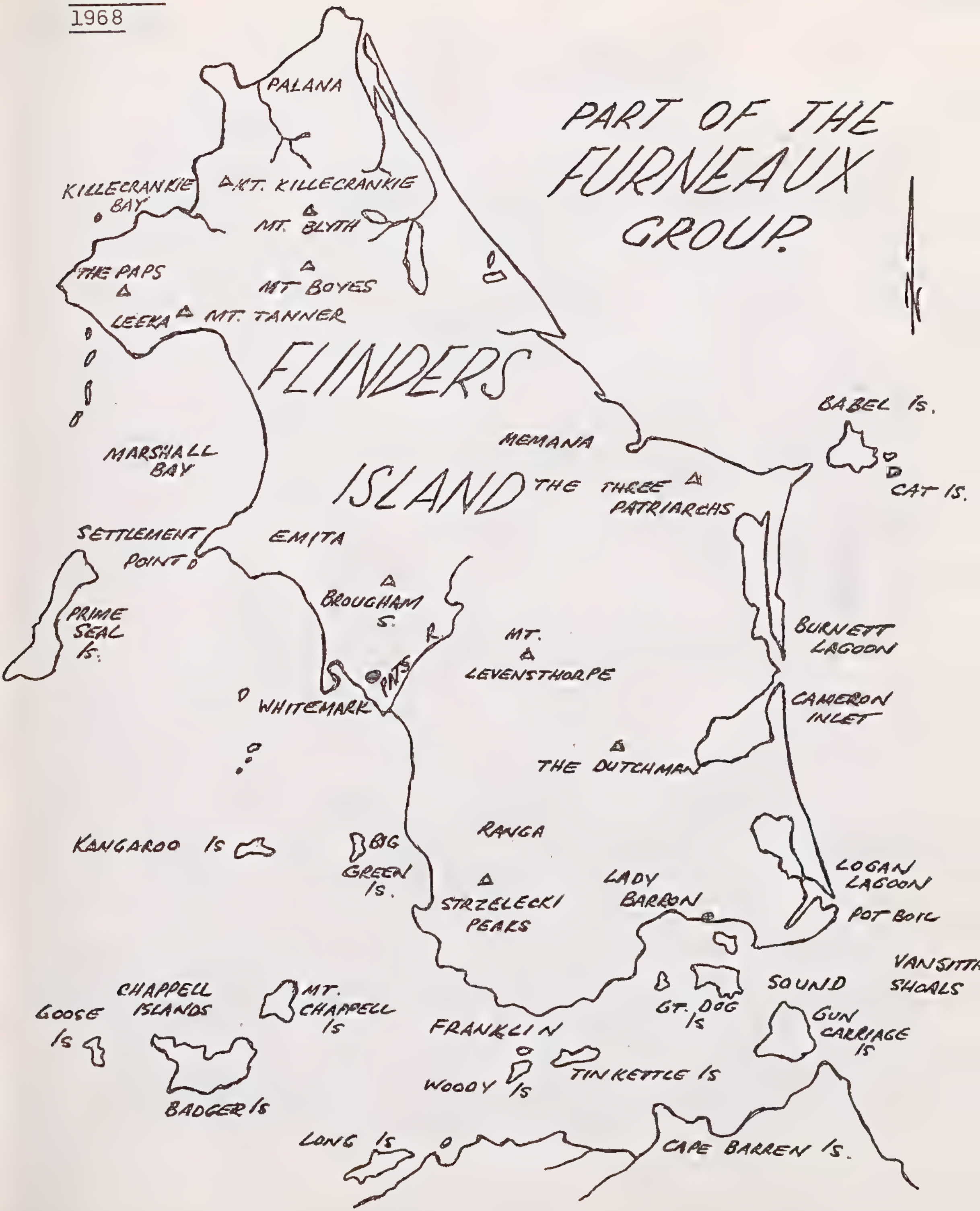
the ship is left sitting on the beach beside the jetty.

Every week or so, the Transport Commission's three hundred ton motor vessel "Sumatra" (or the "Old Rustbucket" as it was known) would come in to Lady Barron to offload cars, trucks, petrol, tar, food and supplies, and superphosphate. While not loading or unloading superphosphate I supplemented my income by working on the fishing boats. This often helped me to get a meal too, for I was camped on the concrete floor of a tin shed near the police station, and not only is accommodation virtually nonexistent away from the hotel, but food is expensive.

The islands are timeless, and the people hard working, but I always made time to wander off into the bush, to explore the granite mountains and the rocky bays, and to get out onto the smaller islands. Often I would get up well before dawn and load crayfish from the fishing boats for the Melbourne market until breakfast, and then have the rest of the day off to go out to the islands on one of the boats. The people accepted me as an islander rather than a tourist, and as a result I made a lot of friends and saw a lot of places innaccessible to most visitors. No sight can be more breathtaking than a warm glowing sunset over a cluster of small mountainous islands at the end of a still blue sound.

The islands are rugged and dry. Geologically they are fascinating, but most of their natural vegetation has been changed. At no stage did I see a tree bigger than about twenty feet in height - they have all been cut down. Birdlife teems around the islands. The Cape Barren Goose makes frequent appearances on Flinders Island, and of course the shearwater is numerous everywhere. Seabirds of many types about the islands are under study by the C.S.I.R.O. which has a research station on one of the tiny islands in Franklin Sound.

When I finally left the islands it was not without misgivings. There is no doubt that the group has a peculiar beauty, and although it is not easy to get about, it is ideal hiking country. Never will I forget sitting on the rocks of beautiful Killecrankie Bay cooking my dinner and looking across the water, past the moored fishing boats with their rigging singing in the evening breeze, towards rugged Mt. Killecrankie lit up in the rich light of the setting sun. Such meals only come once in a lifetime.



PART OF THE FURNEAUX GROUP.

"THE BALANCE OF NATURE"

By L. Elms, Belmont.

The tide goes out, and there along the shore are shells
    And rock pools for us to explore on every hand.
But soon the tide returns and covers all,
    And washes out our footprints in the sand.
The castles which the children built will fall
    Before its power.
And so the natural balance is restored, and things return
    Within the hour, to as they were before.

The night is dark, because there is no moon
    To light our way.
Ere long the full-moon comes again,
    And then the night, instead of being dark
Is light again - almost as bright as day

A drought and fires have caused us much concern -
    But then the Winter came and good rains fell
Where fires had burned.
    New growth now covers plains and hills as well.
Fertility in Nature's Plan can thus be plainly seen
    As o'er the former dismal land there comes a luscious green.

When Winter came, the tallest mountain peaks
    Were white with snow
Which covered all the ground for many a day.
    The birds were forced, through lack of food, to go
To other feeding grounds, and there to stay.
But now the Spring has come again, and all the birds flew back
    To their normal feeding grounds, to start life off anew.

Some other birds also set off, and took to migrant flight
    To reach some very distant lands
        By flying day and night.
There they remained awhile to rest, but Nature had it planned
    That they returned across the seas,
        Back to their own homeland.
Their nests await along the shores which they had set out from.
Back to these nests, for days and nights, they travelled on and on.

"THE BALANCE OF NATURE" (Cont'd.)

In Winter-time our Parks look bleak and bare,
    The tree trunks stand out stark and very bold.
The Autumn-tinted leaves are very rare
    Amongst the forest background we behold.
But Spring soon comes - the leaves soon show their green,
    And wattles beautify the bushland scene.

And so we see, in many ways, that "NATURE'S BALANCE"
    Always stays to help all forms of life.
The tides come in and out, the full-moon passes on.
    The Winter follows drought, and regrowth comes along.
The birds at times fly on for food, but later they fly back,
    As well as all the migrant birds along their lonely track.
Spring follows Winter - Day follows Night,
    One thing is always true -
That "NATURE'S BALANCE" never fails, no matter what we do.

* * * * * * *

WEDGE-TAILED EAGLES NEST NEAR GEELONG

By Trevor Pescott, Belmont.

Over the last few years we have seen an increase in the nesting of the Wedge-tailed Eagle close to Geelong; the latest of these is at Bellbrae where the eagles are rearing two eaglets, in a nest built in a messmate on the edge of cleared land.

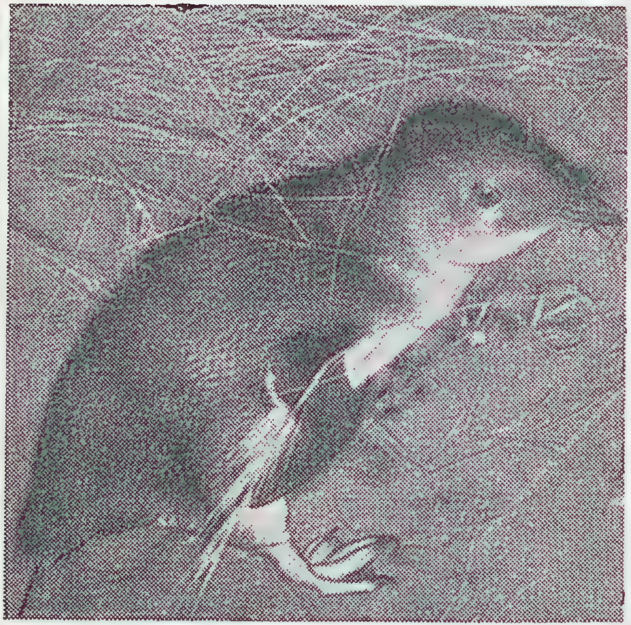
Last year, the eagles nested successfully at the You Yangs for the first time in many years; over the last several decades, the eagles have attempted breeding at the You Yangs, in nests on Wooloomanata and Mt. Rothwell.

In each previous case, the eggs had been taken, or some other form of interference caused the eagles to desert; contrary to general belief, eagles will readily desert eggs, and even the climbing of the nest tree will often cause the birds to desert.

A few years ago, a huge nest near Gum Flat was found with two large, white eaglets in it; last November, this nest was burned out in a bush fire, and this year the birds have rebuilt nearby.

PENGUIN STUDY

By J.R. Wheeler, Belmont.



The life history of the Little Penguin (Eudyptula minor) is being studied by members of the Victorian Ornithological Research Group.

Breeding pairs and young in pegged burrows will be flipper banded at the Penguin Reserve on Phillip Island. At the Cat Bay rookery banding will be carried out to determine dispersal and periodical checks will be made at other known breeding areas around the island.

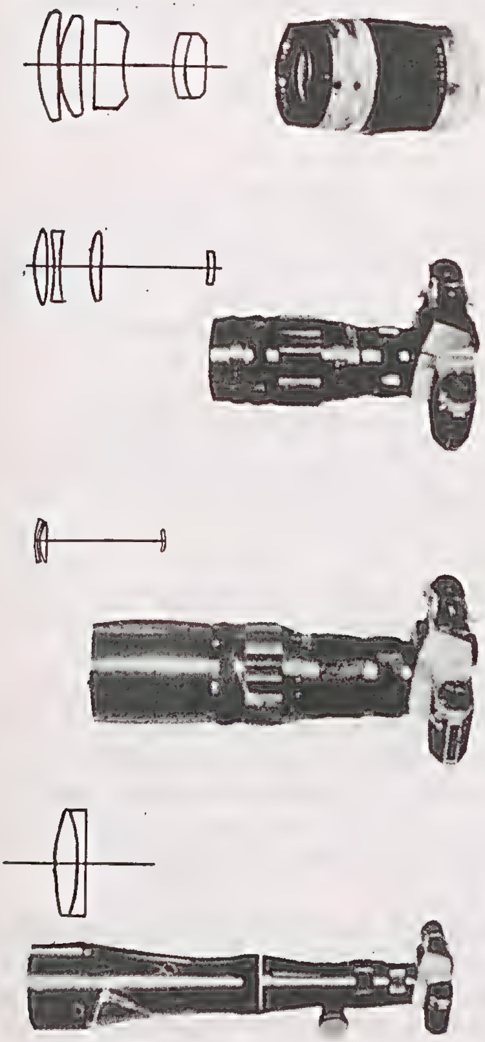
The Secretary of the Australian Bird Banding Scheme plans to issue flipper bands to interstate banders, thereby adding to chances of recovery over long distances.

The most distant recovery so far published is that of a Northern Blue Penguin, recovered 80 miles by sea from its banding place. This resulted from a study of a marked population in Wellington Harbour by Dr. F.C. Kinsky of the Dominion Museum, which covered two full breeding seasons embracing a full yearly cycle.

The present study on Phillip Island will continue until life expectancy can be established, which may take up to twenty years. Intensive work on the rookeries will cover a much shorter period.

Freshly dead (beach-washed) specimens will be examined at Monash University for gonad development, stomach content, and endoparasites. Ectoparasites are being collected (numerous on breeding birds), and despatched for classification.

PHOTOGRAPHERS!



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PENGUIN STUDY (Cont'd.)

Sightings of banded penguins, place, date, circumstances, weather etc., will be most welcome. Seals are thought to be predators of Little Penguins and where dead seals are found, stomach contents could be examined.

Forward all details to Mrs. Pauline Reilly, 1 Exon Street, Hampton Vic., 3188.

The first recovery was made at St. Leonards recently when a dead beach-washed specimen was found at St. Leonards. It had been banded as a juvenile at Phillip Island.

You are asked to examine all dead penguins seen on any beach and if flipper banded, remove the band and forward it with particulars to Mrs. Reilly or to Division of Wildlife, C.S.I.R.O. Canberra, A.C.T.

If the bird is alive and is banded, do not remove the band but take note of the band number and with any other details that could be of interest to the above addresses.

* * * * * * *

THE EMU AROUND GEELONG

By Trevor Pescott, Belmont.

When Matthew Flinders walked across to the You Yangs about 165 years ago, he noted that Emus were quite plentiful; a few decades later, the bird was extinct in this district. No doubt settlement,fencing, land clearance and so on caused the big bird to abandon the area for less disturbed ones, and now the Emu is found no closer to Geelong than the Grampians.

The Emu was undoubtedly a breeding species here, although there does not seem to be any historical record of any nests.

On a G.F.N.C. excursion to the sand dunes behind Point Lonsdale, fragments of Emu egg shell was found amongst seashells which indicated an Aboriginal kitchen midden. Last month, Mr. Roddick of Point Lonsdale described further eggshell fragments which also appear to be Emu eggs.

Where did the Emus nest? This we will probably never know, but there are many places where the birds would have found sheltered nesting sites. But there seems to be no reason to suggest that the egg shells would have been carried over long distances by the Aborigines.

BIRDS IN A GEELONG GARDEN

By Valda Dedman, Highton.

It is amazing how many birds one can see in an ordinary suburban garden. I am fortunate to live opposite a large park-like property which probably attracts the birds for miles around. Some stay all year, some are only winter visitors, but always there are plenty to watch and delight in.

Of course we have sparrows (which I quite like), starlings (which I dislike intensely even in their handsome white-spotted autumn plumage on account of their dirty habits), aggressive blackbirds, pretty little twittering goldfinches and a lovely English thrush. The rest however, are native species, and it is these I find the most interesting.

We almost take for granted the carolling of magpies in the morning. At the moment these birds are quite bold, and will come right up to the front steps, seeking and probing with their strong white beaks. Kookaburras laugh at us from time to time as they sit high up on the wires in front of the house. Mudlarks come and go, with their "Pee-wee" call, and fight their own reflections in the windows in Spring. The most common birds, however, are the honeyeaters, large and small.

With us throughout the year are the red wattle birds. Announcing their presence with a harsh cry, they fly to their favourite tree, a silver peppermint. They will hang precariously from the very tip of the branches so that they are practically upside down and you can see the yellow wash on their underparts. The wattles (which give them their name) hang down in a red blob at the side of their throats as their beaks probe into blossoms, or into cocoons and spider egg sacs, sometimes getting entangled in the sticky web. These birds are fond of flying insects, too, and dart out at them, turning swiftly once the mouthful is gulped and coming back, tail spread, to land on the tree once more.

The white plumed honeyeaters stay all the year too, but we don't see them so much in our garden since the yellow winged honeyeaters came back about March. We have a little flock of yellow-wings, noisy, aggressive birds who like to perch on the very top of a

BIRDS IN A GEELONG GARDEN (Cont'd.)

tree and survey the world, often proclaiming their lordship with a burst of shrill song. As they feed they keep up a constant loud "chip" sound or make a sort of ticking noise. They are constantly on the move, the flash of yellow in their wings catching the light as they twist and turn. On still evenings particularly they turn their attention from nectar gathering to insect catching, at which they are very skillful. Their antics remind one of flycatchers. The Yellow-wings are forever arguing among themselves and do their best to chase away other birds, even those larger than themselves.

One bird they have tried to chase away, but which still returns to the fuschia bushes I planted especially for him is the Eastern Spinebill, one of my greatest favourites. He is such a handsome little bird with his chestnut brown abdomen and bib, his black collar framing a pure white waistcoat, and his black head finished off with a slender curved beak which can reach right into the fuschia flowers. He tells me he is around with a sharp "peep-peep-peep-peep-peep", a thin piping, monotonous to some, but welcome to my ears. The spinebill is a restless little bird, that is seldom still. When he alights on a branch, he perches first one way, then another, till he is sure he is safe. I have seen him stretch up to his full height to reach into a distant blossom, or hover, humming bird - like, wings beating rapidly, while he sipped from another. The only time I have seen him quite still was when he had sneaked up on to the Yellow-wing's favourite grevillea, and the Yellow-wings came back on the opposite side and did not notice him.

We have a pair of golden Whistlers. The male is beautiful - olive green back, glorious golden front separated from a white throat by a black band. The female is greyish brown with a very neat darker brown pattern in the feathers of the lower back. The whistlers have a somewhat thick neck and head which they constantly put on one side and look down at the ground. I heard them before I saw them - whistlers have a very strong call - and the sound sent me racing outside to investigate. They have not sung much however. Sometimes one of them has given a very soft puff of a whistle, beak hardly open, just a pulse beating in the throat.

BIRDS IN A GEELONG GARDEN (Cont'd.)

The Crimson Rosellas are rather pets. They seem almost pompous as they walk slowly along. Sometimes they fossick around among the dead leaves under the apple tree, picking up a leaf with one foot and getting something off it with their beaks. And all the time they talk softly with one another. Their gorgeous plumage makes them outstanding visitors. Rich crimson and dark blue with a lighter blue patch on the wing - how could anyone fail to be charmed?

Other parrots have stopped from time to time. For a couple of weeks a flock of noisy screeching lorikeets invaded the blossoms of the eucalypts across the road. What a commotion! They were mainly little lorikeets and musk lorikeets, and were so intent on feeding that we walked right underneath the trees without disturbing them. From a distance they are very hard to see without binoculars, as they are basically green, but once you get them into focus the glorious grass green of their underparts and bluish green backs almost startle you with their beauty. No drawing or photograph I have seen has done justice to these birds. A pair of musk lorikeets has remained in the neighbourhood.

A few Striated Thornbills have been about. They are quite unafraid, flying quite near even while I have been talking. At times I have been so close that I could have put out my hand and picked up one of these tiny fragile birds. Only three and a half inches long, they have an olive green back and light, yellowish front, with very fine brown striations on head and chin. They flit about with a tiny "Zit" noise, picking the scale off the lemon tree leaves, so they are useful as well as loveable.

The bird which has given me the most pleasure of all is the tiny Rose Robin. Smaller than the other "red" robins, he has a dark slatey grey head, back and bib and a deep rose pink breast with white underparts. There is practically no white on his forehead. This little jewel of a bird normally lives in the Otway rain forests, the only other place I have seen one. Rose Robins do sometimes come into the more open country in the winter months. I am especially pleased that one chose to visit this part of the world. He has been here for several weeks now and sometimes when

BIRDS IN A GEELONG GARDEN (Cont'd.)

I open my bedroom curtains of a morning, there he is to greet me, in the tree just outside. We stare at each other for a few moments, then he flits away to another tree and sits for a while, flicking his tail up and down, and arranging and re-arranging his wings. He has been the only robin to stay; scarlet robins have only passed through.

One day as I was working outside, I heard a familiar twittering, and thought the starlings were up to their old imitating tricks. But I was wrong. There, on the newly turned compost heap, was a pair of wrens, tails cocked in the air. There was a female, and a juvenile male with blue showing only in his tail. They stayed a few days in mid-June, and I haven't seen them since.

We have had brief visits from other birds, too. A Grey Thrush called for the day on June 20th. Last year I saw one on June 22nd. Do they always pass this way at mid-winter? I saw and heard the same one (or was it another?) again on June 27th. Their beautiful soft grey plumage and clear song endears these birds to me, in spite of habits that are not always quite nice. Their full name is Grey Shrike Thrush, and once deep in the Otways I saw one make off with a young nestling.

Another grey bird, but larger (13 inches) is the Black-faced Cuckoo Shrike. Three of them appeared in mid-June and sat on the telephone wire just outside the window. Their distinct black face makes them easily identifiable.

Other visitors or residents are silvereyes, white-naped honeyeaters, willy wagtails, welcome swallows and grey fantails. And now another regular has been sighted. When I started this article (at the end of June) I was awaiting the arrival of the yellow-faced honeyeaters. Last year the first had arrived by mid-June, and they stayed till late September. This year, it was not till July 2nd that I saw the first. Although not a showy bird, this little fellow with his cheery call of "chick-up" is full of life, and I look forward to seeing more of them in my garden.

Who knows what other bush birds may pay me a call? I'm always on the lookout for new ones. There are plenty to be seen in the

BIRDS IN A GEELONG GARDEN (Cont'd.)

Geelong area. All you need is a pair of keen eyes (aided by binoculars) and the ability to drop your work from time to time and just stand and stare. You will be amply rewarded.

* * * * * * *

BLUE TONGUE LIZARDS AND MILK

By Oonah McHaffie, Park Orchards.

The paragraph "Blue Tongue Lizard" by Joyce Hunt in the July issue of "Geelong Naturalist" interested me especially about its milk drinking habit. It reminded me of our experience with blue tongue lizards when we had a home on King Island, about twenty years ago. Blue tongue lizards were plentiful as also were copperhead snakes. Both visited our back porch at various times; the lizards under their own volition; the young copperheads brought in by our cat

Although the cat would kill the snakes, she was frightened of the blue tongue lizards. Some of our Melbourne visitors also looked askance at them, which was not altogether surprising. When one of these lizards is on the defensive, puffed up, and with blue tongue darting in and out, it can look quite fearsome.

I was able to get a photograph of one drinking milk out of the cat's dish with the kitten looking on. It was not a good photographic example as the subjects were difficult. At this time we had a young cat, only a few months old. It was very curious bu approached with caution. Although I spent some time crawling around on the concrete with my No.2 Box Brownie poised ready for a snap, I did not know how near I could approach before one or both took off.

* * * * * * *

AT RANDOM

GALAHS INCREASING: by Jack Wheeler, Belmont.

Despite its early publication of about 1914, the book by Sir Charles Belcher, titled "The Birds of the District of Geelong, Australia" still gives much valuable information as to the distribution of birds in our Geelong district in the early 1900's.

Of the Galah, Sir Charles has this to say: "it may be that the instances of its occurrence in the open about Geelong are to be ascribed to escapes from captivity".

Ten years ago when I first came to live in the Geelong district, galahs were to be seen but only in small parties.

Eight years ago two pair bred in hollow trees at Mannerim. The increase in numbers since then has been gradual and it could be said that the galah is now permanently established on the Bellarine Peninsula. The largest flock I have recorded there was on 27th February of this year, when I was astonished, whilst driving along the Swan Bay road at Murradoc, to hear the loud calls of galahs in flight. I stopped my car to watch this flock in their zig-zag flight and all alighted in a nearby sugar-gum plantation. I counted 72 birds in this flock, easily the largest flock I have ever seen in the Geelong region.

Galahs are now also permanently established along the Moorabool Valley from Batesford right through to Maude. No doubt the many fine red-gums in this region would attract them for breeding.

CATTLE EGRETS AT DRYSDALE: by Jack Wheeler, Belmont.

In September of 1965, I wrote of the concentration of Cattle Egrets at Whittington. Many of the 26 birds developed breeding plumage, and by September 29th all had dispersed and only odd birds have been reported there since.

AT RANDOM (Cont'd.)

Odd birds have since been recorded throughout the Western District - October 1965, Lake Bolac; November 1965, Leopold; April 1966, Dennington, Point Henry (Geelong), and Whittington (one only). No more reports came in until December 1966, when two appeared on the Belmont Common and both were in breeding plumage. Then there was another lag until May 1967, when two were seen at Avalon. Two months later Mr. Lionel Bigmore, then living at Drysdale, contacted me about two white birds associating with his dairy herd and that same had been there on and off for twelve months. From then on, I made regular calls at Drysdale and rarely I was unable to see these strange birds. By the end of July a third had joined the other two.

These birds would constantly follow the dairy herd about the paddocks adjoining Lake Lorne at Drysdale, and if not there, they would on occasions be across the road with cattle in paddocks there. On several occasions I found them with a small flock of sheep on Mr. Bigmore's property. When the stock were resting, the Cattle Egrets mostly wandered down to the waters edge of Lake Lorne and preened and rested.

During September 1967, one of the three gradually changed to a mustard brown, the breeding plumage of this species. It later left the district. Of the remaining two birds, one changed to breeding plumage about mid-November and by the end of that month, it also flew off, leaving the pure white bird on its own. During the summer months, the paddocks here dried off considerably and there being little feed available in the paddocks, this lone bird left the dairy cattle and the sheep, and adopted a shorthorn bull which fed regularly in the reeds of the fast drying Lake Lorne. By the first week in April Lake Lorne was practically dry, and it was during that week that this lone bird was last seen. It will be most interesting to see if these egrets return to Drysdale, now that the drought is broken and lush pastures prevail. More strange though, is where did the birds that developed breeding plumage finish up? - No breeding record of Cattle Egrets is yet known for Victoria - however they have been known to breed in the Grafton district of New South Wales, but I feel that these birds would find suitable breeding habitat in many places in northern Victoria without travelling all the way to Grafton.

JUNIOR PAGES

Just too late for our July issue was a letter from Allison Knox of St. Leonards, who wrote some most interesting notes on one of our nocturnal birds.

> "Last Christmas holidays I discovered two tawny frogmouths perched up on our fence, under the sahde of some trees. They were holding their heads high and stiff and the bunch of feathers above their bills gave them the appearance of a dead limb. Their plumage was a deep mahogany color. While I was in their presence their eye lids were closed leaving a slit which seemed to follow me shich ever way I moved. Frogmouths are not owls but are related to the nightjars and swallows. They are fond of insects like grasshoppers, phasmids, centipedes and cockroaches, and take mice on occasions."

It is particularly interesting to see that Allison knows that Frogmouths are not owls - did you know that?

****

More bird notes, this time from Mannerim, an area rich in bird life, for there is still sufficient bush left to hold there a good number of birds.

The first letter is from Gregory Bolton.

> "About two months ago (June '68), we were very interested in a spurwinged plover family that lived by the roadside near here. There were two young ones, and often they and their mother would cross the road just as a car was passing by. Once we thought we had killed on, but it must have been just between the wheels of our car, for when we stopped and looked for it we could see not sign of it. Next day both young ones were there as usual. As they grew older they didn't hide as carefully, and one day Mr. Wheeler banded them. Since they have been able to fly we don't see much of them."

JUNIOR PAGES (Cont'd.)

Another letter came from Doug. Bolton, who writes -

> "Last week (late August '68) I was "dive-bombed" very fiercely by two spurwinged plovers. I was very surprised, for I thought all baby plovers would be at the flying stage at this time. But a day or two later I managed to get within sight of them before they had noticed me, and I could see four baby plovers near them. As soon as the old birds saw me they attacked me quite savagely, but I couldn't find the young ones when I got closer."

A third member of the Bolton family, Mark, also had some bird notes.

> "Last year two kookaburras built their nest in a dead pine tree at our place, in a milk can we had fastened high up in the tree. All went well till the two young ones were about two weeks old, then after two very hot days, when the temperature was over 100°, we found the young ones were dead.
>
> Today we noticed them flying round the tree and "laughing" a great deal, so we put some hay in the can, and tied a bag around it to keep it from being too hot in the summer, if they nest there. I hope they will!

Lastly, another footnote from Gregory on 12/9/68 -

> "The frogmouths at school are sitting on eggs now."

Banding of birds is done by placing around the bird's leg a metal ring on which is stamped a serial number. If someone finds the band later, we can learn a great deal about the bird - how old they live, if they migrate, and if so where, the change in plumage, at what age they nest - these are just a few answers that are found by banding.

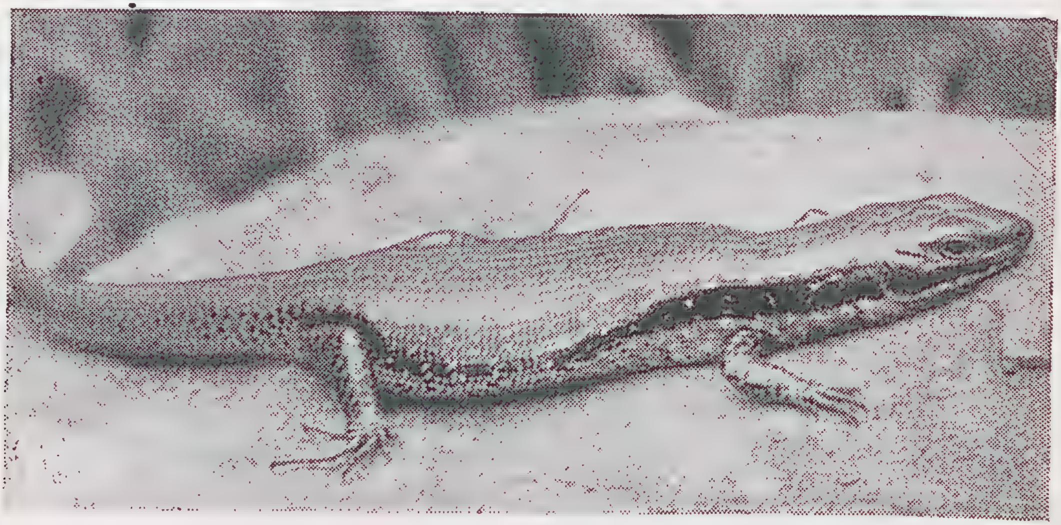
If you ever find a banded bird, return the band (if the bird is dead) or the number, carefully checked to make sure there is no accidental error in writing the number, and the date and place where the bird was found to the address shown on the band.

There are several licensed bird banders in Geelong, each one working in his spare time on special projects

JUNIOR PAGES (Cont'd.)

REPTILES

In our last issue, we were to discuss reptiles. The photograph below shows the Water Skink, one of our most common lizards around Geelong.



Reptiles include not only lizards and snakes, but also crocodiles, tortoises and turtles.

There are several distinct groups of lizards, these being defined by Eric Worrell in his book "Reptiles of Australia" as follows -

"Geckoes (family Geckkonidae)	Elliptical eyes; no movable eyelids; flabby non-imbricate scalation.
Legless Lizards (family Pygopididae)	Snake-like; no moveable eyelids; hind limbs scale-like.
Skinks (family Scincidae)	Head shields present; eyelids moveable except in genus Ablepharus.
Dragons (family Agamidae)	No head shields; body roughly scaled; moveable eyelids; flat tongue.
Goannas (family Varanidae)	Non-imbricate scales; eyelids moveable; tongue bifid in basal sheath."

Elliptical - oval shaped; non-imbricate - not over-lapping; scalations - scales; bifid - forked.

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Hon. Editor: Trevor Pescott

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COVER PHOTOGRAPH:

Venomous Ringed Octopus from Torquay

by Trevor Pescott.

GEELONG NATURALIST

Vol.5. No.4. January 1969.

EDITORIAL

The article in this issue on the policy of the Forests Commission of Victoria to control-burn the forests in this state is extremely timely, for we have just experienced a day of devastating fires around Geelong.

Although most of the area burnt was private grazing land, the Forest Commission of Victoria controlled You Yangs suffered severely, with the East Flat being hardest hit. Most of the trees planted on that Flat by the Bird Observers Club and the Geelong Field Naturalists Club have been burnt, a loss not only of trees but of years of work.

Could this have been averted if the You Yangs had been control burned?

The arguments put forward by Mr. Hodgson in his article represent a vast amount of research; but can the long-term effects be gauged so soon - could it be possible for example, that a regular (say 5-yearly) burn may over-stimulate the orchids and cause their eventual extinction?

Is it possible that our eucalypts which regenerate beautifully after a fire may not be capable of continued regeneration?

Perhaps as far as wildlife, the flora and fauna, is concerned, one big fire each second decade may be far better for regeneration than more regular low intensity burns.

Time will tell, but in the meanwhile, read closely the article on the next page, and try to decide for yourself.

TREVOR PESCOTT,

Hon. Editor.

FIRE IN THE FOREST

By A. Hodgson

INTRODUCTORY COMMENTS - by Alan Lonsdale.

In the April, 1968, issue of the Geelong Naturalist, the practice of controlled burning in the Grampians and other bushland areas by the Victorian Forests Commission was criticised[1]. The main comments were that the natural beauty of the area was spoiled, flora and fauna were damaged, undesirable species of vegetation flourished after fire, and, in general, ecological relationships were upset. In March, 1968, Mr. Athol Hodgson, Fire Research Officer with the Victorian Forests Commission, delivered a talk to the Geelong Group of the Society for Growing Australian Plants on the subject of controlled forest burning, and in the course of which many of these criticisms were refuted. The following article is based on this talk.

1. Carr and Lonsdale. "Notes on the Grampians Flora - Part 2." Geelong Naturalist, 5,1, April 1968. pp. 19-20.

- - - - - - - - - - - - - - -

The role of fire in the ecology of the Eucalypt forests of south eastern Australia prior to colonisation by Europeans is not well understood. But there is plenty of evidence that fire has been a force in the forest environment for thousands of years. This can be inferred from a large number of formal ecological studies reported in scientific journals. Direct evidence comes from charcoal in river deposits, charred wood in the ground and historical records which describe the fires seen by early explorers. But perhaps one of the most remarkable pieces of evidence that fire has been a significant factor in the forest ecology is the development of certain physiological features of the genus Eucalyptus which allow it to live with fire. These include

(i) dormant buds on the trunk and branches which produce epicormic shoots and leaves if the crown is destroyed,

(ii) lignotubers which produce new shoots when the stem is killed and,

(iii) a thick heat resistant bark which protects the cambium.

FIRE IN THE FOREST (Cont'd.)

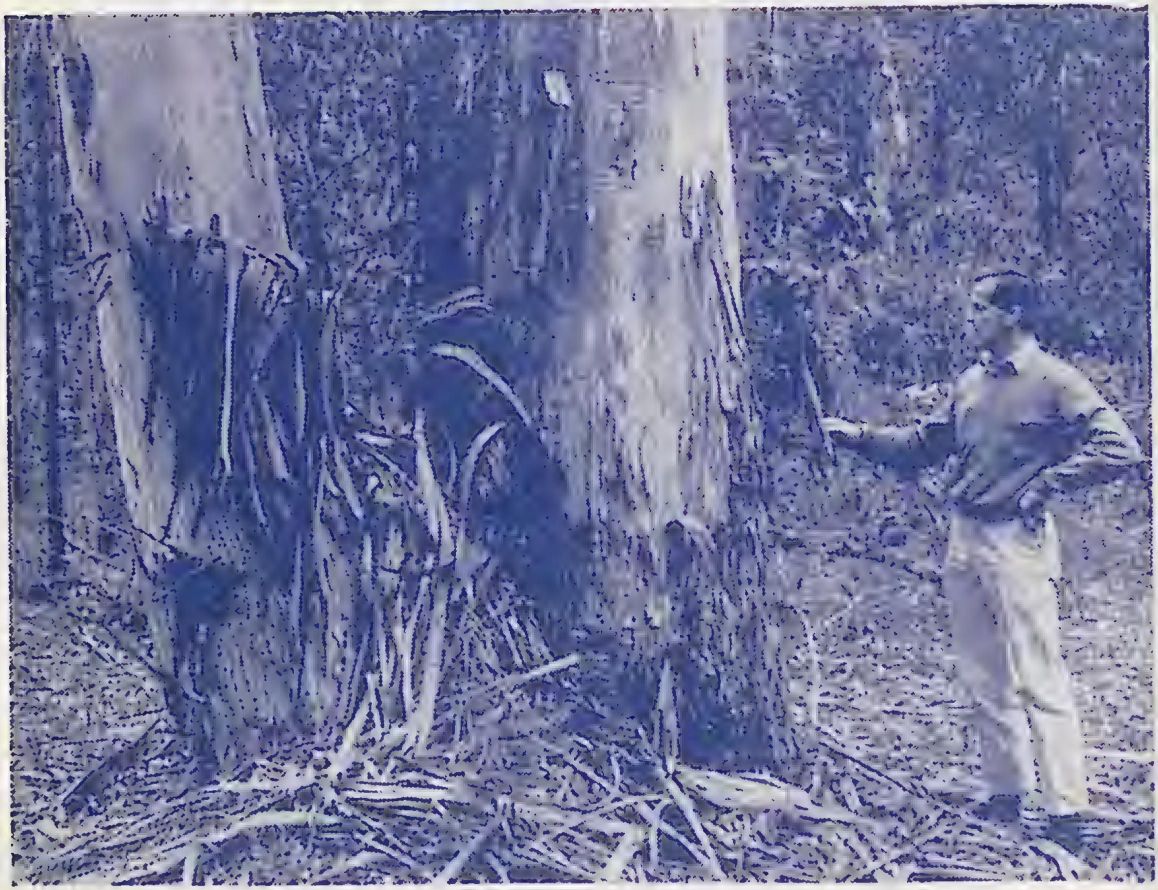
These features are well developed in species that grow in a climate where fire is common. They are less well developed in species that grow in a climate where fire is rare. Mountain Ash is an example of the latter. But even this species is ecologically adapted to fire. It fails to regenerate unless a good seedbed is prepared and neither nature nor man has ever had much success in providing a good seed bed without the aid of fire. Without fire this species is eventually replaced by other types of vegetation. A hot devastating fire kills a Mountain Ash forest but ensures its replacement by providing a receptive seedbed for regeneration of a new crop. If any further evidence is needed to suggest that fire has been in the forest for thousands of years it is only necessary to reflect on the fact that each year in south eastern Australia a hot dry climate cures a flammable forest fuel. Lightning and the hunting fires of aborigines made widespread fires a certainty in this environment.

Before colonisation occurred it seems likely that fire, wildlife, flora and the aborigines existed together in some sort of balance. This balance may not have been static nor need it have been beneficial to all the values concerned. This is history now and is only of interest to us today in so far as any lessons learned can be applied in the circumstances that exist today. These circumstances are quite different from those that existed before colonisation. In the first place the area of forested land over which wildlife and plant populations can move has been reduced. In other words, habitat has been restricted. The composition of the forest has been changed. The form and density of some tree species has been altered and some new species have been introduced. Also the demands of modern society had created values that did not exist before colonisation. Clear water, recreation and straight trees are some of these new values.

The role of fire in this changed environment is quite different from the role it played prior to colonisation. It is perhaps impossible at our present stage of knowledge to present a complete and well balanced account of the effects of fire on all forest values. But a great deal is known and new facts are emerging almost daily as many fire ecology research projects develop. If forest land is to be managed effectively to produce the products that the community needs,then these fire effects must be understood and interpreted in terms of the forest values involved.

Before we can attempt to evaluate fire effects it is necessary to

FIRE IN THE FOREST (Cont'd.)



Heavy fuel accumulation of deciduous bark from Eucalyptus trees.

understand that fire is a release of energy and that energy does work. The effect of a fire on the environment is determined by the amount and rate of energy released. In Eucalypt forest fuel the amount of fuel burned has an enormous influence on fire behaviour. Doubling the amount of fuel burned doubles the rate of spread of the fire and increased its intensity four times. This happens without any change in weather or fuel moisture content.

FIRE IN THE FOREST (Cont'd.)

Result of fuel reduction burning in Eucalypt forest.

Eucalypts are prolific shedders of dead material. Litter fall of more than 2-1/2 tons/acre/annum has been measured and even after losses due to decomposition are subtracted the build up can be as much as 1-1/4 tons/acre/annum. There is no evidence that this build up ceases in time. There is good evidence that the amount of litter beneath a Eucalypt forest is still increasing twenty years after a fire. By this time there may be ten to twenty tons per acre of litter on the ground. When the energy contained in this amount of fuel is released

FIRE IN THE FOREST (Cont'd.)

suddenly by fire, enormous damage is done. Wildlife is killed, timber is damaged, erosion occurs and, all too frequently, lives and property are lost.

The control of high intensity fires is severely aggravated by spectacular "spotting" which is the result of the amount and physical character of bark in the litter. "Stringybark" and "candlebark" can comprise more than 30% of the total litter. This bark has some remarkable aerodynamic properties and it lifts readily in a convection column over a fire. It will carry long distances downwind and start spot fires ahead of the main fire front. "Spotting" up to 18 miles ahead of the main fire has been recorded. When this happens no reasonable amount of man and machine power can match the energy released by the fire. There is very little that can be done until either the weather changes or the fire runs out of fuel. This is not a defeatist attitude. It is a realistic appreciation of the facts.

The number of fires which develop this extreme behaviour is quite small, certainly less than 5%. The remainder are controlled by a very efficient fire control organisation. But the few high intensity fires cause most of the damage and despite improvements to detection systems and access and despite the latest developments in equipment, technology and firefighting techniques these fires have not been eliminated. It seems they are inevitable when drought dries out heavy fuel accumulations.

If we look at the problem of these fires in its simplest terms, it consists of three things
(1) the weather which dries the fuel
(2) something to start the fire and
(3) the amount of fuel available for burning.
There is not much that can be done about the weather and despite the best intended legislation and publicity against fire, fires still start. But the fuel can be altered and it is here that there is a real chance of doing something to reduce the damage done by wildfires. If the fuel is to be altered or reduced over large areas, then fire is the obvious tool to use. The planned application of low intensity fire over a designated area to reduce fuel and at the same time do little or no damage to forest values is known as control burning in Australia. It is not the purpose here to describe how this is done but to give some reason

FIRE IN THE FOREST (Cont'd.)

why it is done and what is known about its effects on forest values.

The effect of control burning on reducing the area burned by devastating wildfires is well understood and there are now many instances where spectacular saves have been due to control burning. This, however, may not be enough to justify the practise over wide areas if control burning itself is causing damage to the forest. This is the problem that worries many people particularly those interested in flora and fauna.

There is no doubt that control burning alters the forest environment. The key questions are just what is being altered and how. Is it altering a natural environment in which all the values are in some sort of balance or is it altering something that is not natural? It seems likely that the heavy fuel accumulations that are found in many forests are not natural but are the result of forest practices and the exclusion of fire from the forests. There is no doubt that the accumulation of fuel itself causes a change in environment and there are many instances where this change is detrimental to wildlife and plant communities. If it could be guaranteed that all fire could be kept out of these fuels then the fuel buildup might be tolerable. But of course this cannot be guaranteed and as fuels get heavier the chances of a wildfire increases. When Eucalypt fuel gets to 15 tons per acre a fire is uncontrollable in moderate fire danger weather. There are just too many moderate, high, very high and extreme fire danger days to expect that fire can be excluded from these forests forever.

If control burning alters this unnatural fuel, it is not too unreasonable to expect that the change is in the direction towards what was the original condition of the forest floor. It cannot be assumed that this is good for all biological and physical aspects of the forest but if we take a careful look at what is known about fire effects in the forest then it is immediately obvious that fire is not nearly as destructive as many people believe. In fact, as this story will attempt to show, there are many values within the forest which actually require fire for their very existence and without fire in some sort of frequency the value is lost.

Let us consider some of these values more specifically.

FIRE IN THE FOREST (Cont'd.)

Wildlife

The effect of fire on wildlife must be looked at in terms of effect on habitat. It is not significant that wildlife can be found on a burnt area a day or so after the fire. Neither is it significant to find a few dead birds and animals in the fire. The change in the habitat determines whether or not wildlife populations thrive or decline after a fire and it is only in these terms that fire effects can be judged.

There is little doubt that wildlife populations are resilient to fire. The resilience depends much on their ability to move away from flames as a fire passes and to take advantage of both unburnt and burnt country for shelter and food after the fire passes. A real danger to wildlife populations from fire exists because they are weakened by land use practices such as farming which has reduced the area of habitat and restricted their ability to move. The Helmeted Honeyeater of Western Gippsland in Victoria is a good example of this. It once ranged over forested land in West and South Gippsland. Land clearing within its normal habitat has restricted the birds to timbered roads and watercourses in a small area of West Gippsland. It is now in a condition where a single high intensity fire could wipe out the whole population.

Many instances are known where fire and wildlife are compatible. Bandicoots, Emus, Wallabies, Lyrebirds and Quail are all known to seek and use burnt ground. Parrots feed on the vegetation which responds to fire. Kangaroos are being reported in increasing numbers in Messmate-Gum forests of Central Victoria where fuel reduction burning started in 1960.

Leadbeaters possum which has been rediscovered in Victoria after being thought to be extinct for 80 years requires regenerating Mountain Ash for its habitat. Neither man nor nature has had much success in producing this habitat without the aid of fire. The direct benefit of fire to this animal is obvious.

Minor Vegetation

Ground vegetation is a necessary value in the forest environment. It provides habitat for wildlife and is essential for recreation. Many interesting species respond favourably to fire. Colonies

FIRE IN THE FOREST (Cont'd.)

of Pink Heath, Victoria's floral emblem, deteriorate if not burned for seven years. Thryptomene becomes woody and unattractive without burning. Poa grass revegetates Messmate-Gum forests in Central Victoria after repeated fires. Acacia and Daviesia can be managed by the frequency with which the area is burned. An Orchid survey in forest at Daylesford in Victoria produced the following results.

ORCHIDS. Population Survey

	Before Burn 1964-1965	After Burn 1966-1967
Greenhoods.	Pterostylus nana	No change
	" nutans	
	" longifolia	
Musk orchids.	Caladenia angustata	Up 20%
	" carnea	
Giant Waxlip	" caerulea	
Sun Orchid.	Thelymitra media	No change
Cinnamon Bells.	Gastroidea sesanoides	Up 25%
Hyacinth	Dipodium punctatum	Up 25%
Copper Beard	Calochelus campestris	No change
Bird orchid	Chiloglottis gunnii	Up 300 to 400%
Leek orchid	Prasophyllum odoratum	

Two orchids, Mosquito orchid and Parson's Band which were not recorded on the plots before burning, appeared after burning.

An area 80 miles north of Melbourne provided a magnificent display of wildflowers in 1966 and 1967. This was a result of a large fire in 1965. The fact that the same fire killed seven people highlights the fact that fire can be both good and bad depending on the values involved.

It is no coincidence that two famous wildflower areas, the Grampians in Victoria and the S.W. of Western Australia are areas where prescribed burning and accidental fires are common. The West Australian Kangaroo's Paw has even appeared on burned areas within pine plantations

FIRE IN THE FOREST (Cont'd.)

Timber quality and Increment.

The effect of fire on Mountain Ash in S.E. Australia is well known. Trees killed in 1926 and 1939 are stark evidence of the damage that can occur. Even low intensity fires during the life of trees of this species seems incompatible with timber values.

Fire effects on more resistant species are less clear. They are obviously a function of fire intensity and frequency of occurrence. Wildlife effects on Messmate-Gum type forest in Victoria are illustrated by these figures taken in the second year after a fire:

INCREMENT MEASUREMENTS

Messmate-Gum	Log volume increment:	Su.ft/acre/annum
	Burned (3500 BTU/sec/ft.)	unburned
SQ II	83	250
SQ III	19	75

Fire intensities below 100 BTU/sec/ft in the same forest have had no effect on increment.

Other research projects in Western Australia and Victoria indicate that if the scorch height from a fire is kept below the level of the leading tip of the tree no loss of growth results.

Soil and water

Control burning produces a very insignificant temperature rise in the soil. Certainly not enough to have any physical effect on those soil characters which affect erosion and water runoff. Control burning has been shown to have no effect on surface runoff. It apparently increased stream flow. It may also increase the solid content of any surface runoff that does occur. This could be a bad thing if the whole catchment is burned. This is unlikely in a properly executed burning programme. Wildfires will burn whole catchments and their effects are known to be bad.

Recreation

The effect of control burning on aesthetic and recreating values can, in the short term, be detrimental. Black stems, burned

FIRE IN THE FOREST (Cont'd.)

wildflowers and dead scrub are not attractive to those who use the forest rarely. But this appearance is short lived and must be looked at as an ecological change in the environment rather than a destruction of values. The forest environment is dynamic and is always undergoing change. It can be changed by fire and it will change if fire is excluded. This latter fact is often overlooked, but it is important because the change can be just as detrimental to some values as if the area was damaged by wildfire. This point is well illustrated by the following quotation of the Chief, Northern Forest Fire Laboratory, Missoula, Montana (Time Newsmagazine, September 15, 1967) speaking about Wilderness areas in the northern Rocky Mountains.

> "Fire has played an important part in building our beautiful wilderness areas. It has come through the forest harvesting, destroying old stands and making way for new ones. If we remove fire 100%, we may destroy rather than protect our wilderness areas."

This is a very penetrating thought which all people who are interested in nature conservation should consider when they advocate protection of natural assets on forest land. Foresters have considered it in their studies of ecological changes brought about by fire and other forest management practices. As a result of their knowledge of these changes and the forces that cause the changes, foresters use fire where it is an essential tool in forest management, and they attempt to exclude it as an undesirable force when and where its effects are bad.

* * * * * * *

PHOTOGRAPHS REQUIRED BY EDITOR

Photographs for use in future issues of "Geelong Naturalist" are urgently needed by the Hon. Editor; photographs should be sharp in detail, of good contrast, and printed on glossy paper to the finished size. They should have the title, locality and photographer's name written clearly in pencil on the back, so that appropriate credits can be made when the photograph is used.

* * * * *

GEELONG FIELD NATURALISTS CLUB: FOURTH FIELD OUTING:MARYSVILLE OCTOBER 18th., 19th., & 20th.

By Jack Wheeler.

Personnel List: Mr. O. Andrews, Mr. & Mrs. W. Anderson, Miss M. Arthur, Mr. & Mrs. J. Bell, Craig Bell, Miss G. Buckland, Mr. & Mrs. R.T. Buzaid, Mrs. B. Campbell, Phillip Campbell, Mr. & Mrs. L. Elms, Mr. & Mrs. E.G. Errey, Robin Errey, Mr. & Mrs. N. Gillham, Mr. & Mrs. F.W. Grueber, Helen Grueber, Rosemary Grueber, Miss L. Hill, Mr. H. Jennings, Wendy Jennings, Wayne Jennings, Jenny Jennings, Mr. Z. Joksimovic, Mr. & Mrs. S. Knox, Allison Knox, Peter Knox, Ian Knox, Kees Koppelaar, Mr. & Mrs. R. Lavery, Mrs. G. Layland, Mrs. H. Lomas, Mr. & Mrs. G. McCarthy, Jill McCarthy, Glenn McCarthy, Mrs. N. McNie, Peter McNie, Mr. G. Mathison, Mr. & Mrs. H. Pescott, Mr. T. Pescott, Miss E. Poole, Miss F. Poole, Mr. & Mrs. N. Povey, Mrs. B. Quirk, Mrs. F. Singleton, Miss K. Stoddart, Mr. & Mrs. L. Vincent, Don Vincent, Ken Vincent, Mr. & Mrs. J.R. Wheeler, Mr. & Mrs. J. Whitmore, Mr. L. Wilkinson, Mr. I. Woodland, Mrs. E. Yoeman. (All above accommodated at Mt. Kitchener House). Accommodated elsewhere: Miss M. Henderson, Miss I. Laugher, Mr. & Mrs. O.A. Usher, Mrs. E. Wood. Total 72.

Our Itinerary was as follows:

Friday evening:	
Dinner	7.00p.m.
Spotlight Hike for Gliders	8.00p.m.
Supper	10.00p.m.
Saturday:	
Hike to Gilbert Gully	6.30a.m.
Breakfast	8.30a.m.
Full day car trip Cumberland Valley	9.30a.m.
Barbeque lunch Snow Junct.	1.00p.m.
Giant Trees and Falls	2.00p.m.
Dinner	6.00p.m.

Saturday (Cont'd.)	
Junior Quiz	7.15p.m.
Members Film Evening	7.45p.m.
Supper	10.00p.m.
Sunday:	
Hike through local bush	6.30a.m.
Breakfast	8.30a.m.
Official Group Photo.	9.30a.m.
Car trip to local bush & Steavenson's Falls	10.00a.m.
Lunch	12.30p.m.
Camp Break. Farewell.	2.00p.m.

Mt. Kitchener House is situated in a delightful bush setting at Marysville and the spacious verandah and lounge rooms gave views of the valley and distant mountains. This was our first occasion that full board was provided on our field outings and members enjoyed being free from household chores. It was regrettable that some members had to cancel through illness at the last moment but others on the waiting list stepped in. Another family group had the misfortune to strike serious car trouble en route and we were very relieved when they did eventually arrive late on the Saturday and were able to join in with the remainder of the program.

MARYSVILLE CAMPOUT

An Impression of the Local Flora

By Ted Errey, Belmont.

Although our Marysville week-end in October last provided a great deal of botanical interest, there was not the wide variety met with in previous years. This was only to be expected, for the Hall's Gap and Rocklands visits took us to the renowned wildflower areas of the Grampians, and on Wilson's Promontory in 1966 we explored from sea-level to mountain-top.

Marysville on the other hand, is in a rain forest region, and while gully vegetation there repeats some types found both in the Grampians and on the Promontory, the absence of open heath-lands means a dearth of the smaller floriferous plants so full of interest for the amateur botanist, though the white forms of the Common Heath was growing in patches of open forest as we approached Marysville.

The week-end, however, was by no means devoid of colour. Particularly along the roadsides and tracks, where the removal of taller plants allowed an abundance of sunlight to reach ground-level, the predominant yellows lit up the vegetation. Close to our headquarters at Mt. Kitchener House, two plants were conspicuous.

The Variable Sallow Wattle, with its long narrow phyllodes and catkins of blossom, was past its peak, but still retained sufficient colour to give clear indication of its full springtime beauty. The variable factor in this acacia is in the size of the phyllodes, which range in length from two to six inches and in width from about one tenth to almost half an inch.

More noticeable was the Hop Goodenia, a light plant two to three feet in height, which grew in numbers in the open. Among the timber it was taller and carried fewer flowers. These are typical of goodenias, looking somewhat like yellow violas, though the petals are looser than in other species. The Hop Goodenia is the only shrubby member of the genus. Only one of well over a hundred goodenias is found outside Australia.

Tetrathecas, or Black-eyed Susan, made bright patches of mauve pink among the taller vegetation. Both the common species, Tetratheca ciliata and T. ericifolia, were found, and a white-flowered specimen of the former was met on Sunday morning on the walk to Keppel's Lookout.

MARYSVILLE FLORA (Cont'd.)

Also in the neighbourhood was the Handsome Flat-pea, very attractive with its yellow and orange flowers. This is a taller plant than the more wide-spread species, the Common Flat-pea, so well known in bushland of the Geelong district. Both are weak-stemmed plants scrambling up through other bushes. The leathery leaves of the Handsome Flat-pea haven't the three sharp corner spines found on its smaller relative.

Another pod-bearer, rather insignificant by comparison with the flat-peas and acacias, was the smallest of the three Victorian hoveas. This is frequently only a single stem six inches to a foot in length trailing on the ground, the mauve pea-shaped flowers grouped in the leaf axils. The specific name, heterophylla, points out the variation in the leaf shape, grading from oval at the bottom to longer and narrow at the top of the stem.

The fresh green trifoliate leaves of the Golden-tip brightened the shrubbery in many places, and the loose racemes of golden flowers added splashes of colour rather different from the yellows of other legumes.

EUCALYPTS

The most plentiful eucalypt in the vicinity of our Guest House appeared to be the Narrow-leaf Peppermint. Perfume of the crushed leaves helps to identify these trees. The saplings and regrowth by the roadside carried the typical juvenile foliage, narrow, opposite and stalkless. This is very similar to that of the Manna Gum, but the flaky peppermint bark is distinct from the smooth covering of the gums. Different again is the grey and brown fibrous bark of the Messmates that grew in company with the peppermints, the Broad-leaf species of which was also seen.

The outstanding eucalypt of the Marysville district is, of course, the Mountain Ash, famous as the world's tallest hardwood. On the Saturday afternoon members visited the Valley of the Giants along the Cumberland where the tallest of Victoria's Mountain Ash are found. A number of these magnificent trees approach 300 feet in height, and would doubtless exceed that figure but for a fierce wind storm some years ago that

MARYSVILLE FLORA.(Cont'd.)

snapped the tops off most of the finest specimens.

Club photographers could be seen flat on their backs on the grass beside the mighty butts in order to include as much as possible of the trunks in their colourful slides.

These trees are allied to Peppermints in some respects, having similar buds and capsules, but the persistent bark covers only the lower part of the trunk to varying heights. Above is the smooth bark of the gum group, greenish in colour, and this peels in long ribbons in the usual gum-tree fashion.

MOUNTAIN GULLY TYPES

The Cumberland area is elevated rain forest and two other interesting trees thrive in the cool dampness of the gullies.

The Southern Sassafras carries nutmeg perfume in leaves and bark. The leaves, in opposite pairs, are toothed in varying degrees, shiny green above and whitish beneath. From the axils hang pairs of scented flowers, an inch across. In places the paths were plentifully dotted with the pale cream blossom.

Myrtle Beeches are well known in the Otways, where they have given the name to the township of Beech Forest. In the eastern half of the state they occur on the Promontory and in sections of the Yarra catchment area. The leaves form flat fan-shaped sprays and the young foliage is coloured like the tips of eucalypts and lillypillies.

Understandably there are many other cool gully trees and shrubs in the Marysville hill country, and a number of these attracted our attention during our stay. Possibly the best known would be three trees common to fern gullies throughout the south-eastern corner of Australia. They usually go by the names of Musk, Hazel and Blanket-leaf.

The first is a Daisy-bush or Olearia, the largest of about 140 species found in Australia. The toothed leaves are satiny white on the under surface and have a musky odour when crushed. In contrast to these smooth leaves, those of the Hazel Pomaderris are wrinkled above by the veining, while the under-surface is covered by a brown and white felting. The third species goes a stage further in its efforts to lessen transpiration, for the underside of the foliage has a quite woolly surface, hence the name Blanket-leaf.

These three trees grow to a height of twenty feet or so, and help to provide denser shade and wind protection for the tree ferns and other

MARYSVILLE FLORA (Cont'd.)

more tender plants below.

Less plentiful but very attractive was the Banyalla, a Pittosporum with much narrower leaves than the Sweet Pittosporum so often found in gardens and nature strips. The Banyalla has smaller flowers, yellow with shadings of purple and maroon, which explains its botanical name, Pittosporum bicolor. Those found at Marysville had the maroon colouring.

MINT BUSHES

Two species of Mint Bush grow in these shaded gullies, though neither was flowering at the time of our visit. One is very plainly a mint bush, for the foliage is even more strongly scented than that of the Oval-leaf species from New South Wales, which provides a mass of rich purple in our gardens in October. So strong is the perfume from the foliage of the Balm Mint Bush that it is known to timber workers as "Stinking Charlie", but this should not be taken to mean that it is obnoxious! In "Flowers and Plants of Victoria" Mr. Jim Willis describes it as "powerfully aromatic". It flowers about a month later than the well-known garden shrub, and it furnished a delightful picture in parts of the Otways when this club visited the Mt. Sabine area in November, 1967.

A month later still is the Victorian Christmas Bush, growing usually almost in the creek bed, and bearing lanceolate toothed leaves three to four inches long. In December and January the white blossom, tinged with lilac, provides a conspicuous blaze in the gullies, and the ground beneath is covered in white as the flowers fall.

FERNS

Time did not permit detailed study of the dense fern and other vegetation in the gully bottom. Soft tree ferns were there, of course, and Coral Fern was climbing among its neighbours in Gilbert's Gully, forming a tangled mass five or six feet high. Damp cool spots in more open areas provided ideal surroundings for the dainty Maidenhair Fern.

In such places were found the only two orchids seen in bloom, the Alpine Greenhood and the Common Bird Orchid. Sun Orchids

MARYSVILLE FLORA (Cont'd.)

were in bud, but not sufficiently developed to permit identification of species.

The Ivy-leaf violet also revelled in such conditions and numerous purple and white flowers peeped shyly from the grass.

MORE ACACIAS

Snow Junction, the site of our Saturday barbecue, provided us with a golden background comprised mainly of Silver Wattles, whose dark trunks with varied amounts of silvery moulting, rose tall and straight by the roadside.

It was there that we found a wattle that was new to us all. We thought first of Golden Wattle, till we saw that the phyllodes were curved, with the main vein well off centre, being much closer to the outer edge of the blade than the inner edge. Reference to Mr. Fred Rogers' "Field Guide to Victorian Wattles" led to the conclusion that it was Acacia obliquinervia. No common name is listed, so we assumed that the species is not plentiful.

CREEPERS

A spot of purple among roadside vegetation caught the attention of a sharp-eyed junior. This was the fruit of the Purple Apple-berry, which follows the yellow-green tubular flower on this very attractive creeper. The Clematis was also in bloom in many parts of the forest, at times covering stumps or bushes with its starry cream flowers. Here and there the rich blue of the Love-creeper, conspicuous only when flowering, brightened the bracken fern and other low growth around which it twined.

So fascinating was the scenery in general, with mountain vistas and tumbling waterfalls, not to mention the varied bird life, that I'm afraid too many plants were overlooked in this rather general account, but Steavenson's Falls themselves, rushing down their rocky way, brought under our notice the Mountain Correa, the tallest of the genus. Growing up amongst its crowding neighbours to eight or ten feet as it was, the plant was somewhat spindly in form, and the greenish yellow cylindrical flowers were therefore scattered, but standing on its own in a mountain stream bed it forms a shapely and interesting shrub.

Marysville district, we felt, like each of the other places that have entranced us on our October week-ends, offers quite enough for a further visit.

MARYSVILLE FLORA (Cont'd.)

Common and Botanical Names of Plants discussed
(In the same order as in the article)

Common Heath	Epacris impressa
Variable Sallow Wattle	Acacia mucronata
Hop Goodenia	Goodenia ovata
Black-eyed Susan	Tetratheca ciliata
" " "	" ericifolia
Handsome Flat-pea	Platylobium formosum
Common Flat-pea	" obtusangulum
Common Hovea	Hovea heterophylla
Golden-tip	Goodia lotifolia
Narrow-leaf Peppermint	Eucalyptus radiata
Manna Gum	" viminalis
Messmate	" obliqua
Broad-leaf Peppermint	" dives
Mountain Ash	" regnans
Southern Sassafras	Atherosperma moschatum
Myrtle Beech	Nothofagus cunninghamii
Musk, or Musk Daisy-bush	Olearia argophylla
Hazel	Pomaderris aspera
Blanket-leaf	Bedfordia salicina
Banyalla	Pittosporum bicolor
Sweet Pittosporum	" undulatum
Balm Mint Bush	Prostanthera melissifolia
Oval-leaf Mint Bush	" ovalifolia
Victorian Christmas Bush	" lasianthos
Soft Tree Fern	Dicksonia antarctica
Scrambling Coral Fern	Gleichenia microphylla
Maidenhair Fern	Adiantum aethiopicum
Alpine Greenhood	Pterostylis alpina
Common Bird Orchid	Chiloglottis gunnii
Sun Orchid	Thelymitra species
Ivy-leaf violet	Viola hederacea
Silver Wattle	Acacia dealbata
Wattle	" obliquinervia
Purple Apple-berry	Billardiera longiflora
Clematis	Clematis aristata
Love Creeper	Comesperma volubile
Mountain Correa	Correa lawrenciana

* * * * * * *

BIRDS SEEN AT MARYSVILLE

By Trevor Pescott, Belmont

The habitat around Marysville is different from any we have in the Geelong District, and apart from our rare trips to Healesville and Sherbrooke, this has been our first visit as a Club to the "big" forests.

Although superficially resembling the Otways, the forest around Marysville holds many birds not found there as residents or regular visitors - these include the Lyrebird, Pilot-bird, Whip-bird, Red-browed Tree-creeper, Brush Cuckoo and Black-backed Magpie.

Consequently these five birds, and particularly the last two, are the most interesting of the 51 we recorded during the weekend.

The full bird list, with appropriate notes on the individual species follows; scientific names have been adopted from the R.A.O.U. Checklist.

Nankeen Kestrel (Falco cenchroides) - Seen near Kitchener House on several occasions.
Boobook Owl (Ninox novae-seelandiae) - Heard calling at night.
Gang-gang Cockatoo (Callocephalon fimbriatum) - Heard and seen in various areas; possibly nesting in one of the large trees near Nicholls Lookout.
King Parrot (Aprosmictus scapularis) - Several flocks seen in Marysville township.
Crimson Rosella (Platycerus elegans) - Common around township and in the bush at several localities.
Kookaburra (Dacelo gigas) - Heard and seen regularly around Marysville where they have become quite tame, and in most bushland areas.
Sacred Kingfisher (Halycon sanctus) - Seen and heard near Kitchener House.
Pallid Cuckoo (Cuculus pallidus) - Heard and seen late on Sunday.
Brush Cuckoo (Cacomantus variolosus) - As it does not occur near Geelong, the sighting of this bird on Sunday created a great deal of interest.
Fan-tailed Cuckoo (Cacomantus pyrrhophanus) - Seen and heard calling near Gilbert Gully.
Golden-bronze Cuckoo (Chalcites plagosus) - Recorded from Snow Junction; the call is quite distinctive and is a useful field guide.
Superb Lyrebird (Menura novae-hollandiae) - Heard calling from several gullies.

BIRDS SEEN AT MARYSVILLE (Cont'd.)

Welcome Swallow (Hirundo neoxena) - Common around Marysville where it nests under verandahs in the main street.

Tree Martin (Hylochelidon nigricans) - Several seen; it frequents the large dead trees particularly near the cleared land.

Grey Fantail (Rhipidura fuliginosa) - Seen in most localities.

Flame Robin (Petroica phoenicea) - Several recorded; one seen near Kitchener House was coloured like a female but with a red throat, a plumage characteristic which is confusing ornithologists.

Rose Robin (Petroica rosea) - Seen at Snow Junction.

Pink Robin (Petroica rodinogaster) - Several seen; one was building a nest in low bush in the Cumberland Valley.

Yellow Robin (Eopsaltria australis) - Quite common in most localities.

Golden Whistler (Pachycephala pectoralis) - Heard and observed in several areas.

Olive Whistler (Pachycephala olivacea) - Seen in the bush above Snow Junction.

Mudlark (Grallina cyanoleuca) - Common around the town and in cleared land.

Eastern Shrike-tit (Falcunculus frontatus) - Two seen in the tree-tops near Gilbert Gully.

Eastern Whip-bird (Psophodes olivaecus) - Several pairs seen and heard in the gullies and in the bush on the lower slopes.

Grey Thrush (Colluricincla harmonica) - Quite common in most areas.

Blackbird (Turdus merula) - Seen around the township in good numbers, and in some bushland areas.

Striated Thornbill (Acanthiza lineata) - Several flocks seen feeding in the outer foliage of eucalypts.

Little Thornbill (Acanthiza nana) - Not as common as the previous species, but small groups seen.

Brown Thornbill (Acanthiza pusilla) - Common in the undergrowth and smaller trees.

White-browed Scrub-wren (Sericornis frontalis) - Common in the undergrowth, its presence usually announced by its harsh call.

Eastern Striated Pardalote (Pardalotus ornatus) - Seen in the trees near Gilbert Gully.

Spotted Pardalote (Pardalotus punctatus) - Seen in several places.

Pilot-bird (Pyenoptilus floccosus) - Two seen and many heard near Snow Junction and other areas.

BIRDS SEEN AT MARYSVILLE (Cont'd.)

Blue Wren (Malurus cyaneus) - Common in many areas, particularly in private gardens.
Orange-winged Sittella (Neositta chrysoptera) - One flock seen at Gilbert Gully.
White-throated Tree-creeper (Climacteris leucophaea) - Recorded at Snow Junction and other areas.
Red-browed Tree-creeper (Climacteris eyrthrops) - A pair seen at Gilbert Gully; in appearance, they are rather like the previous species. This bird does not occur around Geelong.
Silvereye (Zosterops lateralis) - Seen in several localities.
White-naped Honeyeater (Melithreptus lunatus) - At Gilbert Gully and in the township.
White-eared Honeyeater (Meliphaga leucotis) - Recorded in several areas; a pair were building an unusually shaped nest in a tree fern at Snow Junction.
Crescent Honeyeater (Phylidonyris pyrrhoptera) - Well distributed and quite plentiful, its call being most distinctive.
Yellow-faced Honeyeater (Meliphaga chrysops) - Another common and loquatious bird.
Eastern Spinebill (Acanthorynchus tenuirostris) - Favours the undergrowth, quite common.
Red Wattlebird (Anthochaera carunculata) - Quite plentiful particularly around the town.
House Sparrow (Passer domesticus) - Common in Marysville township.
Olive-backed Oriole (Oriolus sagittatus) - Seen and heard in the township.
Starling (Sturnus vulgaris) - Common, particularly around the town.
Satin Bower-bird (Ptilonorhynchus violaceus) - Several "green" birds seen in Marysville township.
Raven (Corvus coronoides) - Several seen in various localities.
Pied Currawong (Strepera graculina) - Seen and heard calling over the ranges.
Black-backed Magpie (Gymnorhina tibicen) - Several in Marysville township.

EXCURSION SECRETARY'S THANKS

My personal thanks to all members of our keen Committee for their assistance in organising this field outing which was held in perfect weather. My thanks also to those who provided transport to and from Marysville for members without cars, and to those who transported our equipment for the occasion. We now plan our 1969 field outing and we trust that it will be the success of previous outings.

"ASTRONOMICAL FIGURES"

By L. Elms, Belmont

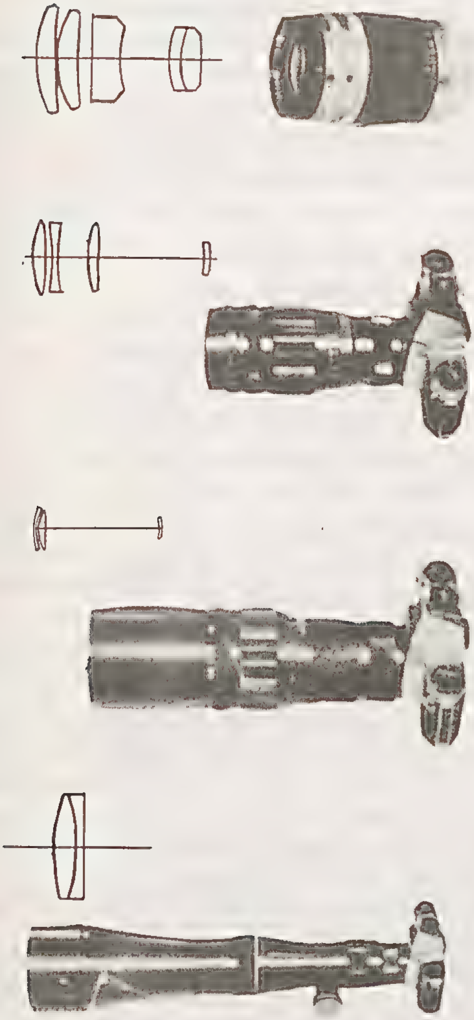
When we use the term "Astronomical Figures", we usually imply numbers running into some thousands of millions. This is because the study of Astronomy has revealed that the vastness of the Universe, in which our world is a mere speck, is so great that the normal units of measurement we use are quite inadequate. For example the stars are so far distant that measurement in miles is futile, so the unit of a "light-year" is adopted. As light travels at 186,000 miles per second, the distance travelled by light in one year (i.e. one light-year), is about 6 billion, or six million-million miles. Even using these huge units of measurement, we are told that the nearest star to our earth, which is the "Pointer nearest to the Southern Cross", is four and one third light-years away.

As for some of the further stars, mention could be made of RIGEL, which is the bright star standing directly above the group of stars known to most of us as "The Saucepan". RIGEL is at the huge distance of 800 light-years away from us. This means that if you look at it tonight, the light which meets your eye actually left the star 800 years ago (in 1168 A.D.), and has been travelling towards our earth at 186,000 miles a second since then. Perhaps it is just as well for us that RIGEL is so far away. We know from the recent heat wave how hot our sun can make things here on earth. Well RIGEL has a luminosity 40,000 times greater than the sun, so lets hope it keeps its distance.

Although one might conclude that such astronomical figures could not be exceeded, such is not the case, and in common objects of Natural History, seen by us every day, we encounter even greater numbers than these. For example, how many grains of sand would you estimate there were in a cupful? Well multiply that by the number of cupfulls on a mile of beach, and multiply again by the number of miles of beach we have near us, and the total figure is not astronomical but infinite.

Or we might consider birds feathers. A leading scientist has explained that from the shaft of a feather the barbs branch off to the sides, and these in turn have barbules and barbicles branching off from them. He estimates that a crane's wing

PHOTOGRAPHERS!



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ASTRONOMICAL FIGURES (Cont'd.)

feather would probably have some 10 million definite structures on it. If we therefore contemplate the number of feathers on a bird, the number of birds in a large flock, and the number of such flocks in ten square miles, the number of individual parts of feathers involved is again beyond our conception. It has been estimated that our flocks of Ibis may comprise some 240,000 birds but Matthew Flinders calimed that the number of mutton birds he encountered in Bass Strait was over 100,000,000 birds!.

When we think of the number of eggs laid by some insects, we think of grasshopper plagues, where it is estimated that possibly some 400 million eggs per acre are hatched out. A colony of Ibis could devour these in one day. In a termite nest the queen termite lays eggs every few seconds, and probably lays about 30,000 in one day, and something like 100 million in her lifetime. Some fish are known to lay over one million eggs, which are left floating in the water.

Aphids have about the fastest rate of multiplication, and under favourable conditions one female may produce live young from 12 to 15 at a time. As these young are capable of reproducing in a fortnight, it has been estimated that the progeny of one female aphid might amount to 3-1/2 trillion by the next season. If these were placed in line, head to tail, they would form a column about 7,800,00 miles long, which would reach 1,000 times around the earth. Thank goodness they don't all survive!

Bacteria also multiply very rapidly, and if one cell were to divide one an hour, it would be possible to produce some 281,500 million bacteria in a period of two days, but fortunately lack of food and the accumulation of waste products prevent this rapid growth, and the newly produced cells die off.

So when you next hear the term "Astronomical Figures", don't be concerned, because here on earth Nature has provided us with actual cases of far greater figures. All the same, although Botany, Ornithology, Zoology and Entomology etc. are very interesting avenues of study, it is most interesting also to get out of the groove now and then, and reap the rewards of a brief study of such matters as Geology and Astronomy.

BIRD THOUGHTS FROM ABROAD

By Rolf Baldwin, Corio

It is a known function of advancing years that they make policemen look like boys in uniforms and bottles to be reduced in size; I am familiar with both these phenomena and think not of them. Now, however, a third has joined them which does worry me very much. The birds seem to be less numerous than they were in my young manhood. At least such was the impression gained on a recent journey through parts of East Gippsland - far enough away to be "abroad" for a Geelong man - which strengthened ideas formed in the last decade or so in the Grampians, the Mallee, the North-east and the Daylesford - Castlemaine - Maldon country.

First, in a well-remembered stretch between Stratford and Briagolong there were none of the noisy miners and eastern rosellas which used to enliven the way. This is strange, for the road is lined by ranks of big red gums, with a fair amount of undergrowth, while beyond there are park-like grazing lands, making a habitat very favourable to these two attractive species. Further on matters were worse. All along Freestone Creek, from Culloden for the next twenty miles towards Cobannah, there was scarcely a bird to be heard or seen. This was understandable, since it is only a couple of years ago that a devastating fire converted all of that avian paradise into a blackened wilderness that is only slowly regaining a fraction of its greenery. All gone are the creekside thickets where thousands of varied birds made merry and the heathy slopes that were haunts of all sorts of honeyeaters. Even five years ago this was a place where one could confidently take the stranger to show him gang gang cockatoos, king parrots, satin bower birds, whip birds, golden-tufted honeyeaters and all the other less spectacular species that inhabit such country.

On the Freestone, at least, a cause could be pinned to the gloom, but in other places this was not so. What of McKillop's Bridge, for instance? In that strange, remote place, where the lofty spurs and ridges, with kurrajongs and the exotic-looking Murray pines thickly sprinkled among the familiar eucalypts, look down on the mighty Snowy, there does not seem to have been a major bushfire in years. Along the Snowy and the homelier, tumbling Deddick there are grassy flats in plenty, thick scrubs and timbered slopes, which should support a numerous avian population. Yet in all of a calm, sunny evening and a sparkling Spring morning scarce a song or call was heard and the only birds actually seen were a couple of immature blue wrens. How can one account for that?

BIRD THOUGHTS FROM ABROAD (Cont'd.)

And what would one have to say about the Bairnsdale district? One camp, on the Boggy Creek near Bullumwaal, was in the bush of our youth. Against the background music of the rushing water rang the "Egypt" of the white-eared honeyeater, the haunting, ringing whistle of the shrike-thrush, the bell notes of the currawong, the laugh of the kookaburra, the harshness of cockatoos and the "beetroot" of crimson rosellas like a pennant of sound among the upper branches of the tall, slim manna gums. The innumerable busy little sounds of the small fry in the lower scrubs ran through all as a sort of theme song. Yet at another halt, less than forty miles away, on a calm evening and a bright morning, there was scarce a sound. The scene was a sandy ridge in the banksia scrubs, with plenty of eucalypts and an abundance of heath and bracken, the very place, seemingly, for a bird-watcher's delight. But what happened? A passing sulphur-crested cockatoo gave a disdainful squawk from on high, a white-eared honeyeater was heard, two tree-creepers passed swiftly by - and beyond that there was nothing. What a disappointment! And in Spring!

Only here and there, apart from the Boggy Creek interlude, were there memorable compensations. Once in the twilight as we

McKillops Bridge, Upper Snowy River.
Photo by R. Baldwin.

BIRD THOUGHTS FROM ABROAD (Cont'd.)

turned back from Mount Wills, defeated by snow and a desperate grade, we saw a magnificent male lyrebird run across the road only a few yards from us. He was far more impressive in his very wildness, under a lowering sky, in the sombre, dripping forest, than are the comparatively tame birds of Sherbrooke. On another occasion, the late afternoon being again dark and drizzling a hen lyrebird was seen in ungainly flight from the downhill edge of a sidling road to the upper bank perhaps ten feet above. This seemed remarkable compared with their usual downhill volplaning efforts or the clumsy fluttering which takes them up a tree. Most picturesque of all were the eagles. As we stood by the roadside on a bend looking down into the vast, sun-filled, thousand foot chasm of the Little River Gorge, a great wedge-tailed eagle sailed out into the void from the trees far below us, followed in a moment by another. It is difficult to put into words the excitement and elation that the watcher feels as he looks down, able to observe the graceful, finger-like movements of the wing feathers and the darting glances of the head, as these noble birds slowly soar in great circles, till at last they are far above him in the open sky.

Last of all came an observation and a problem. During a pause at quaint old Port Albert, with its ancient buildings and its memories of Macmillan, there were pied oyster-catchers and anonymous waders far out on the mud flats. Closer at hand were numerous silver gulls. They are so handsome, active and bold that they are always interesting to watch, but they are so familiar that the scrutiny is likely to be idle. So it was on this occasion and it was some time before we actually noted that one of them was drinking from a pool of fresh water. This is something that the present writer, in much watching of these birds, has never noticed them doing before. And so these random notes end with some questions. Do silver gulls drink regularly? If they are tipplers, is it salt or fresh water that they favour? Do the truly maritime birds, such as albatrosses, feel thirst and, if they do, how do they satisfy it?

* * * * *

A BIRD'S ANT ACID DIET

By C.J. Gibson, Belmont.

Do birds eat ants? Some, at least, most certainly do. And what's more interesting is that they are introduced to such dietary delicacies - or is it, medicinal necessities, for I'm not sure which as yet - at a very early age in life.

The evidence of my own eyes confirmed by those of my family provide proof of such facts. The facts being - one warm sunny afternoon (November 10 to be precise) we were travelling towards Armidale (N.S.W.) and at about 20 miles east noticed several birds fluttering just above the ground. Investigation revealed a male and female hooded robin hovering several inches above an ants nest. The ants nest was about 5 feet in diameter and swarming was in progress - many winged females were about the surface of the nest. The robins would hover for a few seconds and then without alighting pick up one of the large winged females and immediately fly with it to a near by fence where two young were being fed. The young obviously enjoyed the diet but I did not observe either adult eat one though they could well have done so for our observations were short.

The two adults were busily engaged in this task and must have caught many ants for their young if they had continued for long.

A little further down the road we saw two grey thrushes enjoying a similar diet - they had no young and were themselves consuming the ants as fast as they could.

I wonder whether these winged females at this time of season contain formic acid as some ants do or something else that particularly pleases these birds. I'm quite certain that the ordinary wingless workers or males were immune from such attack although in numbers they would have far exceeded the females.

I had not seen nor even heard of birds actually eating ants previously - I wonder how many others had.

* * * * *

At Random

SWIFTS SEEK WATER ON VERY HOT DAY: by Rev. Father Eames, Broadmeadows.

Wednesday January 22nd 1969, was a day when the mercury climbed to near the century mark. I was visiting Blackwood and spent some time observing birds in the region of "Shaw's Lake" and all at once a flock of some 150 Spine-tailed Swifts circled overhead. The lake was surrounded with very tall trees and imagine my surprise when odd birds broke away from the main flock and dipped to within inches of the ground. Eight of these birds flew down to the lakes surface and touched water, making quite a splash in doing so and one bird in particular hit the water with such force that it was temporarily stunned, dropping to the edge of the bank but soon recovered and flew off to join the main flock.

One may now ask the question, did the swifts seek relief from the heat by touching water, were they having a drink or were they only seeking insects close to the water's surface and in doing so touched water? In all my previous swift observations I had never experienced anything like this.

BIRD NOTES: by Jack Wheeler, Belmont.

Gannets on Wedgelight: For three seasons in succession, a few gannet pairs have chosen to breed on Wedgelight, a pile light situated off Queenscliff in Port Phillip Bay and at the entrance to West Channel. This 1968/69 season, the number of nests increased to thirteen and ten chicks were successfully reared. All chicks were banded with C.S.I.R.O. metal bands and for the first time, this season, the opposite leg is being banded with a blue plastic band. It is proposed to use a different colour each year. The colour for 1969/70 season will be red.

Blue-winged Parrots Breeding: On January 19th 1969, when visiting a patch of bushland near Aireys Inlet with the Bird Observers Club, I noticed several blue-winged parrots along the roadside. They repeatedly

AT RANDOM (Cont'd.)

flew back to the same area. Amongst the group were immature birds seeking food from parent birds. By this it is apparent that they had bred in the area. Several suitable nesting hollows were noted in the area.

A STITCH IN TIME SAVES NEST: by Jack Wheeler, Belmont.

Visiting Aireys Inlet on January 19th with the Bird Observers Club several nests were found. One in particular, right on the roadside was an immaculate nest of a pair of White-naped Honeyeaters, made of fine stringy bark fibre and bound together with spiders webs.

The nest contained two very small young but it was noticed to be hanging precariously in such a manner that the young were in danger of falling out. Two volunteers, Fred James and Ron Lavery armed themselves with some very fine string, a needle, and with the aid of a stool to stand on, repaired the nest by stitching it to leaves and stems, and restored it to an even and safe keel. No sooner than Fred and Ron had left the nest, the parents were back feeding their babies as if nothing had happened.

VALUABLE NEW BOOK: by Trevor Pescott, Belmont.

Arriving too late for a complete review in this issue, but assured of one in the April issue of "Geelong Naturalist", is a book written by Natural History Medalist Mr. J. Ros Garnet; published by the Commonwealth Serum Laboratories and priced at 95 cents, it is titled "Venomous Australian Animals Dangerous to Man".

Featuring prominantly in the book is our cover subject, the Ringed Octopus, and animal which has received an enormous amount of publicity in our local daily press recently.

QUOTE FROM ANON:

The law doth punish man or woman
That steals the goose from off the common,
But lets the greater felon loose,
That steals the common from the goose.

JUNIOR PAGES

In this issue of our magazine is a report of our trip to Marysville by several of our senior Club members.

This story by Rosemary Grueber of Corio gives a junior member's view.

"While holidaying at Marysville we were walking along a quiet bush track when I found a large black snail with a red mantle. It is called a Mountain Land Snail. They are found in the Otway Ranges as well as Marysville. We went on a spotlight hunt for gliders the evening before and were lucky enough to see one. It was called Leadbeater and got its name from the man who first found the species.

Hunting for Lyrebirds we chanced to come upon two pairs of Whip Birds. They are blackish green with a touch of white and a black crest. Tiny Striated Thornbills darted in and out of the tall green umbrella-like tree ferns that grew beside the icy Cumberland River. As we were walking along a sandy track we came to an old rotten log shading a hollow that could well have been a wombat's home; but, on poking about with a stick we found that there was no-one at home.

During the afternoon we went for a peaceful walk down to the Cumberland Falls. Bird calls were frequent as we stopped to look at the low branches of the Sassafras plant. This plant has a small cream flower which grows on the back of its leaves. The trilling calls of the fantail cuckoo lingered in the still night air as we wandered around the beautiful gardens of Mt. Kitchener House.

Early the next morning we set out on a bush walk through the forest. Flame robins perched on the low branches of the tall Peppermint trees, flew away at our approach. A Brush cuckoo was observed in the thick foliage of the topmost branches of the eucalyptus gum. Whip birds could be heard through the thick undergrowth of the bush.

A Rose robin's nest was found in the cosy nook of two branches. Later on our trip to Stevenson's Falls, we came upon a male Golden whistler in dark grey plumage with a brilliant gold waist coat. We saw many

JUNIOR PAGES (Cont'd.)

birds. These are just a few of them: Striated Thornbill, Brush Cuckoo, Bronze Cuckoo, Flame Robin, Rose Robin, Yellow Robin, Whip Birds, Tree Creepers, Pied Currawong, Honeyeaters, Pardalotes, Thrushes and Magpies.

The Falls tumbled down the slippery, jagged rocks into the swirling river below. It was a breathtaking sight. But I am sad to say that the time had come for us to think of departing for home."

* * * * *

Belinda MacDonald of Mannerim made a very good bird observation; she writes:

"I am in Grade Five at Mannerim state school was going for a walk we saw a very pretty bird it was blue and black wings and a red yellow chest. We looked in the bird book and it was a dollar bird we have never seen one before. When we went to see again it was gone."

The Dollar-bird is indeed a rareity in the Geelong district; this summer, more than usual have come down from the northern part of Australia to Victoria, and a few have even come so far south as to reach Geelong.

These birds are not to be confused with the Indian Myna, another bird which has large white spots in the wings.

The spots in the Dollar-birds wings look rather like huge silver dollars once used in America before paper money became widely accepted. The Myna's white spots are very similar. The Myna does not look very much like a Dollar-bird apart from its wing spots, but is a brown bird with yellow beak and eye. Mynas are very common around Melbourne, and are becoming more plentiful around Geelong than they were a few years ago.

* * * * *

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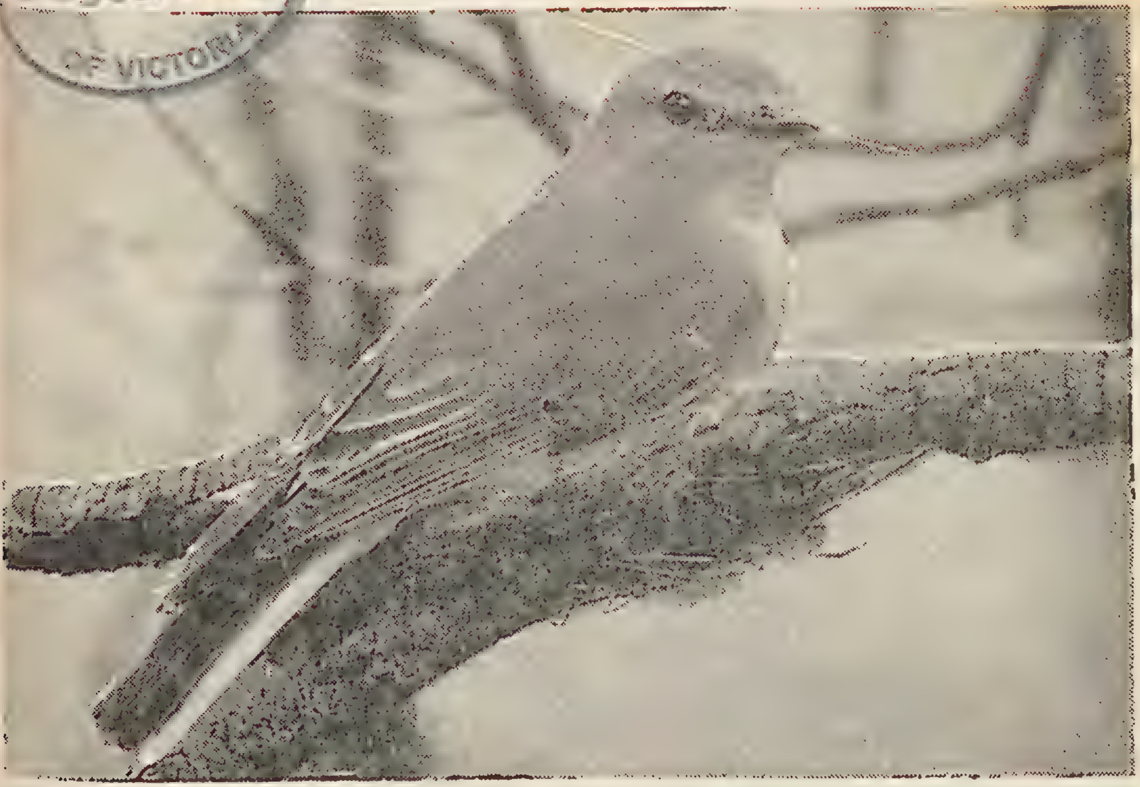

BROWN FLYCATCHER

Hon. Editor: Trevor Pescott

Registered at G.P.O. Melbourne for transmission by post as a periodical

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

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COVER PHOTOGRAPH:

Jacky Winter (Brown Flycatcher) at nest.

by C. Tingate.

GEELONG NATURALIST

Vol.6. No.1. May 1969.

EDITORIAL

It has been decided to bring "Geelong Naturalist" to you one month later than previously, in the hope that more up-to-date editions can be made; the reasons behind the decision are quite obvious when an examination is made of previous issues.

This issue is dated May, and by moving back one month, we can include any information from the April annual meeting, most notably the names of the newly-elected Committee; in an April issue I would have had to use the names of last years Committee, hoping there would be no changes.

By printing in November, we can include a report of the October campout, whilst it is still fresh in our minds.

And February instead of January, will overcome delays caused by a build up of work at the Printers office caused by the holidays in December and January.

It takes about four weeks to produce each issue, for the material has to be sorted, edited where necessary, plates made, and masters types, all before it is passed to the Printer himself to set, print, sort and assemble.

Change of addresses: Please advise Mr. O. Andrews of any changes of address, so that his work in preparing the magazines for posting can be easier; and please ensure that all post codes are correctly and clearly marked, for the Post Office require our envelopes (and there are nearly 400 for each issue) be sorted into post code order.

TREVOR PESCOTT,
Hon. Editor.

COMMENTS ON
BIRD NOTES FROM "THE GEELONG NATURALIST"
PUBLISHED BETWEEN 1902 AND 1913
By Trevor Pescott

Editor's note: The following notes were sent to Sir Charles F. Belcher in December 1966; his reply forms the next article on Page 7 , and should be read in conjunction with this article.

Late in 1965, I was loaned a bound set of "The Geelong Naturalist" incorporating the volumes First Series Vol.5 January 1902 to Second Series Vol.5 June 1913. This was not a complete set of the journal which was originally named "The Wombat", for the first issues were printed before the turn of the century, and the last nearly thirty years later.

However, the set I used covered the period of greatest activity of the Geelong Field Naturalist Club, and consequently much of the material printed then can be used to form a basis on which later observations can be built. It is needless to say that the very few references quoted below are but a minute section of many extensive papers and lectures.

I could not help but note how similar in many ways, particularly in the type of material published, these first two series were to the current "Geelong Naturalist". There was published then naturalist impressions of district places (even as far afield as Siberia and Sumoa) as well as articles and news of local observations.

The following are several observations of particular note, appended to which are comments relevant to the original statements.

Volume 5 No.3 July 1902

"Mr. W. Shaw has the following birds amongst others in his collection Satin Bowerbird - Steiglitz and Freshwater Creek.
Apostle (Struthidea cincrea)
Leatherhead (Philemon corniculatus) - from Steiglitz.
Greenleek Parrokeet (Polytelis barrabandi) - from the Brisbane Ranges."

The late Mr. W. Shaw was one of the original members of the first G.F.N.C.; he was an active collector and taxidermist, and a competant naturalist who worked to a large extent in the Brisbane

BIRD NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

Ranges area. However, the five birds listed are of particular interest to Geelong ornithologists because of their rareity or apparent absence from our district.

The Satin Bowerbird once ranged over much of our district and was particularly common in the Anglesea area and beyond. It is now no longer found closer than the Otway recesses and it no longer occurs in the Steiglitz region. Its passion for orchard-grown fruit made it unpopular and it was (and in some places still is) shot whenever possible.

Unfortunately, no details are available about the Apostle bird in Shaws collection; it is a bird of the inland, and should not be subject to seasonal migrations as are many inland species. There is, however, one interesting possible tie-up - Campbell in his book on Birds of Australia records the Mallee-fowl as a possible nesting species in the Brisbane Ranges. Could there have been a "tongue" of mallee-type birds intruding into the Ranges from further north and west? Another alternative is that the bird was collected in its normal habitat and the label with its data was lost; this does not however seem likely.

Leatherhead is another name for Noisy Friar-bird, one of the honey-eater family; Steiglitz is well south of its normal range which is Eastern Australia as far as the Murray River.

The Superb Parrot, or Greenleek Parrakeet, is an inland bird which would not generally occur here; however it is a strong flier and could no doubt arrive here by the same fly-path as the Friar-bird. It is of interest that every few years, reports are received - generally unconfirmed - that the Superb Parrot has been seen. My own observations are limited to a bird very similar to a Superb seen at Anakie in 1955; the throat colouring, however, was inconsistant with the usual coloring and it was therefore assumed that the bird was an escapee from an aviary.

It is interesting to note that none of the latter three (Apostlebird, Friar-bird or Superb Parrot) are listed in C.F. Belcher's book on Geelong birds.

Volume 5 No.4 December 1902

"The beautiful Blood Honeyeater (Myzomela sanguineolata) came down from its home in the tropical scrubs........ A specimen shot at Queenscliff by Mr. Batchelder was exhibited on September 5th. ...."

BIRD NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

"Another significant alteration to the (Game) Act concerns imported birds. Formerly all birds not indigenous to Australia, except Sparrows and Indian Minahs, were protected throughout the year. For the future only the English Thrush and Skylark and the Java Dove, are to enjoy this immunity."

With regard to the Scarlet (or Blood) Honeyeater, this is one of the very few records of the bird for this part of Victoria; I know of no other records for Geelong. The bird is a tiny honeyeater, a magnificent bird in color and shape, and one which could hardly be mistaken for any other, even if a specimen was not taken.

That the introduced species were recognised as pests so early after their establishment can only reflect the extremely poor judgement of the various aclimatisors who spent so much time in bringing us Blackbirds, Starlings and others. What a pity their time, money and energy was not spent in preserving our native fauna! (Much of the introduction of foreign birds was done in the early 1860's).

Second Series Volume 1 No.4 December 1904

"Satin Bowerbird (Ptilonorhynchus violacens). A small party of Satin Bowerbirds have built a bower in a pine tree over my kitchen at Bambra (October 10th 1892)...... As there were no black ones amongst them, I concluded that most of the birds were females or young males. The bower, which had a passage right through it, was composed of a lot of broken pine branches, laid across other limbs of the tree and built close to the trunk." (J.F. Mulder)

This report was also published in the book of C.F. Belcher, and his comment was: "The instance is the only one I know of a bower being built in a tree; the nest is always in a tree, but it is a small structure not in the least like the bower."

Iredale, in his book "Birds of Pardise and Bowerbirds" describes the bower as being built on the ground, and makes no mention of bowers built in trees. Nor have I seen any other reference to tree bowers.

The complete statement, made by such a competant naturalist as Mulder, is puzzling, and one wonders if there was any point overlooked which may have thrown more light on it. The fact that it was again quoted (some ten years later) in Charles Belcher's book seems to impress the accuracy of the original observation.

BIRD NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

Second Series Volume 5 No.2 July 1912

"The Goldfinch .... was unknown here (Eastern Park) till about 1886. The Ground-finch did not establish itself until 1890, and the Blackbird, Thrush and Starling came even later still." (C.F. Belcher)

This is quite a valuable reference to the introduced birds and interesting to compare with the next paragraph written only one year later (June 1913). The bird called "Ground-finch" would, I believe, be the Greenfinch and this is probably a typographical error rather than an alternative name.

Second Series Volume 5 No.3 June 1913

An article by C.F. Belcher - "Notes on Birds of the Torquay and Anglesea District" and refers to an expedition through the bushland in these areas in October 1912."

"Black-cheeked Falcon - Only met with at Bulls Well. Here the birds bred in the seacliff in 1904, and probably do so still. Psephotus c. chrysogaster. Orange-bellied Parrot - Single birds twice near Anglesea, flying high. If this is what the locals call "grass parrot", a nest is reported as having been cut out of a gum tree near Jan Juc a season or two back." (C. Evans)

"Introduced species as spreading amazingly. The Sparrow is not seen away from farms, but the Goldfinch penetrates the recesses of the forest and breeds in numbers with the Greenfinch and Blackbird in the scrub along the coast near Pt. Roadknight. Blackbirds nest with eggs found along Scrubby Creek a couple of miles into the heart of the bush. The Starling is ubiquitous in partly-cleared country. Skylarks were seen as far south as Torquay. It is now practically too late to check the advance of the imported birds, the greater number of which are, or will speedily become, pests; our unique and beautiful native Australian birds on the other hand are threatened with extinction as the strangers encroach more and more upon their food supply."

It would be just as true to apply that remark about the Falcon nesting today as it was in 1912; the Peregrine (Black-cheeked) Falcons still use the cliff at Anglesea to nest even after sixty two years since first found there. How many generations of falcons have used that cliff we can only guess, but it is to be fervently hoped the birds will hunt along the oceans edge as long as there are cliffs to hold their nests.

Regarding the Parrot, we do not have in any numbers the Orange-bellieds

BIRD NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

in this district now; our commonest Neophema (Psephotus) species is the Blue-winged which nest throughout the Otways. According to Jarman in a recent "Bird Watcher", the Orange-bellied (or breasted) Parrot is one of our rarest birds, with very little known of its breeding habits. It is frequently confused with the other Neophema parrots, particularly the Blue-winged which shares its habitat. Recent records of the Orange-breasted parrot around Geelong, and quoted by Jarman, refer mainly to coastal areas and include Werribee and Mud Island.

The problem of Neophemas around Geelong is a very vexing one for Belcher in his book records the Orange-breasted and the Elegant (Blue-banded Grass Parrakeet)and writes of the latter species - "I feel a little diffident about recording this as a local species on the strength of my own observations; there was, however, in the nineties, a Parrakeet of the genus Euphema (Neophema) which was not uncommon on the plains between the You Yangs and the sea where I often saw it, which I believe to have been this species, as it was certainly not the Orange-bellied Parrakeet."

The answer, I believe, comes in the naming of the species, as the current scientific names of the birds were adopted in the Check-list in 1926; Belcher's nomenclature was adopted from that used by Mr. Gregory Mathews prior to the Checklist publication. Belcher certainly had two species of parrot, and I think if the specimens taken were re-examined in the light of the reclassification of species about 1926 and since, he would name them Neophema chrysostoma, the Blue-winged as the Anglesea bird, and Neophema chrysogaster, the Orange-breasted as the bird on the margins of Corio Bay east of the You Yangs. How I would like to see the specimens in those early collections of Shaw, Mulder and others now, for much early material must have been lost forever!

Again, we have reference to introduced birds; it is interesting to note that before 1890, Blackbirds were not known to Eastern Park, yet by 1912, just twenty years later, they were breeding in the near-Otways.

Acknowledgement
I wish to thank Mr. W. Renton of Newtown for his generous loan of the magnificent volumes from which these bird notes were quoted.

ADDITIONAL BIRD NOTES
from Charles F. Belcher, Sth. Africa.

(The preceeding article was sent to Sir Charles Belcher in Kokstad, South Africa, and in December 1966, he wrote the following letter in reply; he comments about the birds mentioned, and his remarks about the Brisbane Ranges are of particular interest to all who have read his wonderful book "The Birds of the District of Geelong, Australia". ....Hon. Editor.)

"I was pleased to receive your letter (not dated and I'm afraid the envelope which may have carried a legible date was destroyed before I noticed the absence) however it reached me yesterday the 12th December. It was interesting reading over notes made so long ago. But I'm afraid that now in my 91st year memory is so faulty that I can be of no assistance any longer in clearing up identification.

Leatherhead. I cannot have had Shaws 1902 note before me when I was doing the book in London in 1913 or should certainly have incorporated this species in it. By the way, is it too late to get the word Stieglitz spelt right and not Steiglitz. The pronunciation of Stiglitz is near enough though it should be STEEGLITZ which better represents the German family name STIEGLITZ. My own family has been closely connected by several intermarriages into the VON STIEGLITZ family for the best part of 150 years and I know it always hurts them to see it misspelt. STEIGLITZ would be pronounced STYGLITZ in German if there were any such word which there isn't. Incidentally, the name has an ornithological significance - Stieglitz is the German for goldfinch. The present prominent member of the family in Australia is Mr. Karl v. Stieglitz of Evandale Tasmania, a historian.

Brisbane Ranges. I never visited these ranges and don't think I ever considered whether I should include it in my area.

Apostle-bird. I have always thought there could well be a "tongue" of dry-country birdway from Northern Victoria to a bit west of Geelong. All I ever saw of an Apostle-bird was an egg of the species which a boy two years senior to myself gave me when I was thirteen (Trevor Cunningham) who was a boyhood hero to me and lived in a two storey house near the Myers Street State School. His father was Manager of the (National?) Bank. But altho' Trevor took this egg himself, I am sure he told me he got it in the Coleraine district and not near Geelong. I agree that Shaw would not mix up bird labels. I never had

ADDITIONAL BIRD NOTES (Cont'd.)

any note of the Greenleek. Your Anakie bird is to my mind more likely to have been a case of unusual colouring than aviary escape.

Scarlet Honeyeater. I distinctly remember seeing that 1902 skin, shown at a meeting.(I wrote those last words before seeking and finding confirmation in my book.)

Bower Bird. My own belief was that Mulder recorded what was a rare, unique indeed, occurrence. The birds were it seems very tame and may have varied their wild habits.

"Groundfinch". Undoubtedly a missed typographical error for Greenfinch. I would accept my date 1890, but had I been asked I should have put it a year at least earlier that I found a nest with young in a pinus at the very corner of Beach Road and Garden Street, just in the angle of Merchiston Hall garden. I would say from memory (not to be relied on) that the bird was quite common in 1890. (when I was 14)

Falco peregrins. I cannot forbear to add a word or two. A man who became the dearest friend I ever had was in 1904 a lad of 18 and a frequent Sunday companion on pushbike trips to Anglesea and that part generally. He was William John Adie; born in McKillop Street on 31/10/86 and died at the head of his group (neurologists) in London on 17/3/1935. He tried his luck in England on my advice in 1906, though I felt his going bitterly. He had left school (Links) at 12 and passed his matric. at 18 or so from Howe's Auctioneers office (Mr. H. giving him time off). Well, it was a day in October 1904, and I had just found my first Tawny-crowned H.E. nest with eggs near the Bulls Well, when we crossed over to the beach and saw the pair of Falcons soaring and settling. Adie's son, Ian, my godson, is a world authority on the Chinese Language, and my son William, an Engineer by profession now, is Bill Adie's namesake and godson. So you will see it is not alone an ornithological interest that those cliffs have for me, but a memory of the finest man I ever knew, albeit he was little more than a boy then. Please excuse this, but my thoughts have run away with me.

Orange-bellied neophema. All I can say at this long distance in time is that the name I gave for the species I shot specimens of, is taken from Mathews as you say, and that the bird I saw and obtained are the bird, whatever it has since become, that G.M.M.named

ADDITIONAL BIRD NOTES (Cont'd.)

Neonamodes chrysogaster; and it was a different bird from the plains bird whatever that may have been (Avalon, You Yangs etc.).

Well, I seem to have come to the end of your typed notes. - If I could see any reason for my not having compared my neophema skins with Mathew's descriptions I would give effect to that admitted possibility - I haven't the least idea of what became of the skins of the birds I shot of that genus. Don't think I sent them to Mathews, though I may have done, as I sent him skins of the Prion that is named after myself which originated in the same period of my life (1909 - 1913). The idea of the book was conceived on a Sunday on the upper-Barwon with Purnell and I think George Broome (the latter still living) in September or October 1912.

It has been pleasant to dip into these memories again on this Sunday morning in the sleepy capital of East Griqualand, with alien avifauna darting about in the hard sunshine of South Africa. I think S.A. is much the best place in the world for a reasonable man to live; and yet when I transplant myself mentally to Australia I seem to go all soft-like!

Again, thank you for writing and I am only sorry I couldn't be of more help. At least I have tried."

* * * * * *

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* * * * * *

MT. WELLINGTON N58°E

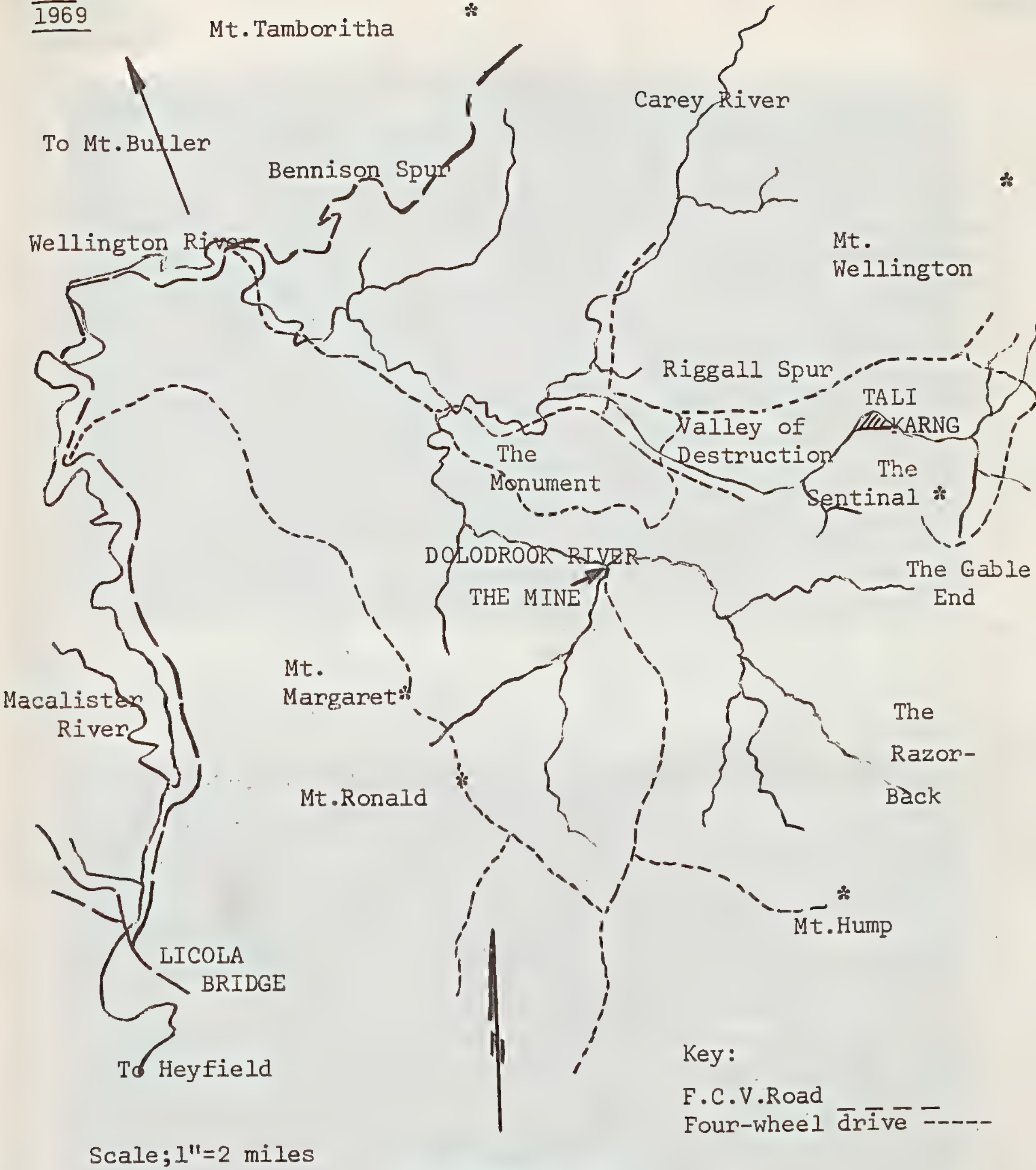
By A.G. Davey.

The valley echoed with the roar of the explosion and fragments of broken rock rained down on the clearing. As the dust cleared I emerged from behind the compressor and went back to the work of sinking the test shaft. Laboriously, holes had to be drilled in the rock and the ore blasted out and shoveled into heaps. This shaft was down about twelve feet, and in the sun the heat was oppressive.

The scarred hillside overlooked a beautiful valley running through rugged dry ranges towards the blue distant valley of the Wellington River. The valley held a stream with a beautiful name - the Dolodrook River, but almost dry in this terrible summer. Nothing stirred in the noonday heat, and, dusty and hot, I knocked off and trudged down the hill from the red mounds of earth, the black and grey piles of ore, and the glaring white scars of the test shafts. I passed a couple of bulldozed waterholes and the diamond drilling plant, and walked into the shade of the timber and down the hill to the river. On the flat was the camp - a big, hot tin shed, the vehicles and the fuel dump. I went down to the river and washed the clinging dust in the ice cold water. Taking time to throw pebbles at a few inquisitive trout nosing out into the shallows, I went back into the hut and sank into a chair.

The two-way radio broke the silence as the midday Forests Commission call came over. This radio was the only communication with the outside world, and the shortest way in overland was a long gruelling four-wheel drive trek from the road. Rugged ranges rise all around the valley, and this small settlement is the only one for many miles. The news of the outside world was coming in on the radio - the latest newspaper at the camp is often a week and a half old. Yet this is Victoria.

Chromite, an oxide of chromium, has been known in the valley of the Delodrook below Mt. Wellington in north-east Victoria since the turn of the century. At first it was thought to be tin, but once identified it was of little significance. Then, a few years ago a small Victorian mining company got the rights to the mining leases, and managed to get a big Japanese company interested. The Victorian Mines Department supplied geological, geophysical and mineralogical information and mounted a diamond



THE CHROMITE MINE.

MT. WELLINGTON N58°E (Cont'd.)

drilling program to determine the extent of the deposit.

Outcrops of chromite occur in serpentine rock in two associated localities in the area. One small occurrence is on a ridge between the Wellington and Dolodrook Rivers known as "The Monument" a mile or so from the larger deposit above the Dolodrook crossing. This larger deposit just above the river by the Mt. Margaret track crossing is that being developed. The mine is ten miles as the crow flies from Licola, itself 26 miles north of Heyfield, in Gippsland. Just to the south-west is Mt. Margaret and on the east five miles away the Razorback runs north from the cliffs of Mt. Hump to the Gable End and The Sentinel. Beautiful Tarli Karng is just five miles from the mine. Mt. Wellington rises to the nor-north-east, flanked by numerous other peaks and substantial spurs. The valley of the Wellington River is itself a truly beautiful sight. The area is mainly composed of Ordovician and Silurian slates, shales and conglomerates. There are some areas of Devonian granitic and isolated patches of serpentines. The valley of the Wellington abounds with fossils and is world famous for its superb graptolites.

Despite the drought there were still some wildflowers out up on the plains, and numerous birds frequented the thickets along the river flats just near the camp. Emus are occasionally seen up here on the plains, but few people pass through to record their occurrence. In my time at the mine the only people I saw were Forest Commission men, a few hikers, and some stockmen. As a student I was working at the Chromite Mine to get experience for mining engineering and as such it was well worth it. I certainly didn't waste my spare time, however. I spent many hot afternoons following rough ridges and creekbeds among the mountains. I walked down towards Mt. Margaret, and along the ridge towards Mt. Hump. I spent many an hour wandering along the quiet river with its dark mysterious pools and colourful rock bars, as it cut its way deep into the range. Many mornings I spent wandering among the cliffs and gorges upstream from the camp, or climbing the Serpentine hills near "The Monument". With my camera and one of the camp dogs for company, I often climbed the long steep track to the ridge above the Wellington and watched the deep valley of its tributary the Carey River gather the evening mist. Looking down from the rocky tops with their yellow box and

ABOVE - The top of the track down into the mine. The clear patch down in the valley is the mine area itself. Mt. Hump and the Razorback are away on the horizon.

BELOW - Our camp on the flat by the Dolodrook River.

Photos by A.G. Davey.

MT. WELLINGTON N58°E (Cont'd.)

ironbark the valley is full of tall blackbutt and woolybutt where the timber cutters have yet to come.

One morning I got up just before four o'clock, and had climbed the track onto the ridge above the Wellington before five. Leaving the track I set off along the ridge, eastward, toward the Gable End five miles away. The "Gable" is 5208 feet and for two and a half hours it was a steady climb through scrub and broken rock. As I got above the dry ridge the timber got bigger and as I got closer to the cliffs of the Gable the going was progressively rougher. By eight o'clock I was getting pretty hot and the ridge still seemed to be going up and up. All around stood huge boulders and underfoot was loose rubble held together by scrub. Eventually I burst triumphantly out onto the top only to find that I had just reached the top of the last big knob of the ridge. I stared across, east, to the forbidding cliffs of the Gable, about half a mile away. Standing on a big boulder amongst the timber, the view at this height was good and the mine appeared to be miles back. The sun had just started to come out from the cloud that had been overhead since before dawn, and the ranges away to the west stretched sun-blotched into the hazy distance.

I pushed on and soon ran into difficulties. I chose a narrow slope up between the cliffs - the only opening to the top from the west side - and it proved to be a loose scree slope covered with particularly thick scrub. Pausing occasionally to look back at the view or to look at a tiny soak in the rocks I fought my way up for an hour. Eventually the scrub got thinner and I emerged into the snowgum on the flat top - for the Gable is flat on top with gentle approaches on the eastern sides and steep cliffs on the west. I sat down on a big rock and looked down on the sea of rugged ranges below. Away to the south I could see the plains of Gippsland around Heyfield and Briagolong. Mt. Baw Baw reared its head into the clearing cloud to my west, and to the north was a succession of big mountains, Mt. Wellington, Mt. Arbuckle, Mt. Kent, and the high plains.

With only one day at my disposal I had to keep moving, so I walked north along the flat top of the Gable to the Sentinel and could look down to Tarli Karng and "The Valley of Destruction". Then, dropping straight off towards the lake I spent several hours srambling and tripping down the scree slope toward it. I got to

MT. WELLINGTON N58°E (Cont'd.)

the valley just near the falls on Nigothoruk Creek above the lake, and after photographing the beautiful falls and rapids, climbed down to Tarli Karng. The lake, showing obvious signs of the severe drought was over twelve feet low, but otherwise just as beautiful as ever. It certainly is a jewel in the mountains.

I had my lunch in the sun on the shingle beach. The day had become a beautiful one, and there was no-one else about. Eventually I stirred myself into action and walked around the lake and climbed up the steep foot track to the jeep track on Riggal's Spur that runs down to the Wellington. The sun was getting low as I reached the bottom of the spur and walked down to the river. Then crossing the Wellington with its murmuring shingle bed, I climbed the steep ridge above the Dolodrook and walked down the track to the mine just as the sun was splashing the Gable with long shafts of orange. Coming down the track I crossed the Dolodrook and before I got to the camp the dogs came out to meet me. I took one last look at the Gable, dimming in the evening light, high to the east.

* * * * * * *

BLACK-COCKATOOS AND GRUBS

By Trevor Pescott, Belmont

There has recently been a large amount of work done to clear and widen the eastern end of the Thompson Track in the Otways, from Forrest east towards the landslide Lake Elizabeth; trees along the margins of the road have been bulldozed to one side, and the road formed with a grader.

The majority of these trees are Messmate, or a very similar Stringybark, for the bark is thick and typically fibrous; all of the trees have been infested with wood-boring grubs which attack the sapwood just below the bark.

Yellow-tailed Black Cockatoos have found these grubs in the felled trees, and each tree has had the bark shredded down to the wood, where the located grubs have been found and eaten.

* * * * * * *

"DOWN TO EARTH"

By Ellen M. McCulloch

Watching a mixed flock of birds feeding on the ground at Wyperfeld National Park in north-west Victoria I was surprised to see a beautifully bright male Rufous Whistler join the throng. As far as I could see, all birds seemed to be feeding on ants, which were plentiful amongst the litter of fallen branches and bark. Other birds in the area, all on the ground, were Jacky Winters, Striped Honeyeaters, White-rumped Miners, Willie Wagtails, Spiny-cheeked Honeyeaters and Hooded Robins, all species which were frequently seen feeding at ground level.

The unexpected sight of the Whistler feeding on the ground started me thinking - for all I knew many birds which are normally thought of as tree-feeding species come down to earth, if food is available there. I went through my notebooks and found several more examples, and I offer these notes in the hope that other people will check on similar experiences. What seems to me an unusual habit for birds in my area may of course be quite commonly seen in other areas, presumably being largely an adaption to the food available.

I have seen a concentration of White-plumed Honeyeaters feeding on the ground at Blackburn Lake - once again the only insects I saw were ants - and Red Wattle-birds and Little Wattle-birds sometimes hop about on my front lawn. Very strange was the sight of an Eastern Spinebill using the concrete path as a vantage point from which to spring up into a wavering haze of tiny midges - this it did for some considerable time. A flock of Brown Thornbills at Flowerdale bobbed about on the grass looking almost like a party of wrens, though the tails were not cocked as high. Mr. Franz Fehrer tells me that on several occasions he has seen Little Thornbills feeding on the ground at the You Yangs, under Acacias.

At a previous visit to Wyperfeld National Park, vast numbers of birds were feeding on caterpillars, which were then on the ground in plague proportions. Included were Black-faced Cuckoo-shrikes which I normally see only in trees, though there are records of them hovering at ground-level. Pallid Cuckoos also were there in numbers, and a Grey Butcher-bird collected beakfuls of the grubs and took them to a nest above.

"DOWN TO EARTH" (Cont'd.)

The famous English ornithologist Mr. Guy Mountfort has stated - "Life history studies demand patience, and continuity of action; random notes and snap judgements are dangerously misleading.", and when one reads his fascinating book on the elusive Hawfinch, which was the result of years of study, it seems presumptious to publish odd facts seen occasionally. On the other hand, we have so relatively little published on the feeding habits of Australian birds that all information is valuable.

Recently published records reveal that parrots eat insects and their larvae, and that Eastern Shrike-tits eat seeds. Blackbirds on my lawn eat wheat, Willie Wagtails search amongst rocks on the sea-shore, and Rock Pigeons find food on the beach.

Detailed life-studies may be beyond the scope of most of us, but records showing adaption by birds to suburban living are probably seen

Red Wattle-bird on ground

From drawing by Rex Davies.

"DOWN TO EARTH" (Cont'd.)

every day. e.g. Crimson Rosellas have been known to eat patent dog-biscuits, and clean off gristle from a dog's bone (Bird Observer Dec. 1965). I have seen an Eastern Spinebill pecking at a suet lump after suet scraps had been loosened by a Grey Shrike-thrush.

Many questions need to be answered - Do Kookaburras collect goldfish from garden-ponds, or do they just sit and look at them? What trees and shrubs (introduced and native) are visited by various birds - for fruit, berries, insects or nectar? Are Starlings a menace or of benefit in suburban areas, judging from food taken? How many species of honeyeaters in Australia have been attracted to nectar-feeders? How many other species? The list of questions is endless and varied.

Notes taken should be as detailed as possible, in the hope that one day they may fill in a gap in the life-history of some of our native birds. Remember that conservation measures can only be effective when based on accurate information.

Scientific names of birds mentioned -
Rufous Whistler - Pachycephala rufiventris
Jacky Winter - Microeca leucophaea
Striped Honeyeater - Plectorhyncha lanceolata
White-rumped Miner - Myzantha obscura
Willie Wagtail - Rhipidura leucophrys
Spiny-cheeked Honeyeater - Acanthagenys rufogularis
Hooded Robin - Petroica cucullata
White-plumed Honeyeater - Meliphaga penicillata
Red Wattle-bird - Anthochaera carunculata
Little Wattle-bird - Anthochaera chrysoptera
Eastern Spinebill - Acanthorhynchus tenuirostris
Brown Thornbill - Acanthiza pusilla
Little Thornbill - Acanthiza nana
Black-faced Cuckoo-shrike - Coracina novae-hollandiae
Pallid Cuckoo - Cuculus pallidus
Grey Butcher-bird - Cracticus torquatus
Hawfinch - Coccothraustes coccothraustes
Eastern Shrike-tit - Falcunculus frontatus
Blackbird - Turdus merula
Rock Pigeon - Columba livia

"DOWN TO EARTH" (Cont'd.)

Crimson Rosella - Platycercus elegans
Grey Shrike-thrush - Colluricincla harmonica
Kookaburra - Dacelo gigas
Starling - Sturnus vulgaris

* * * * * *

ORPHANED GANNETS

By Jack Wheeler

On the weekend of 24-26th January last we experienced gale force winds and it is thought that at this time four young gannets were blown off the high wooden platform of Wedge-Light off Queenscliff in Port Phillip Bay where a small nesting colony is now well established.

The birds which had been banded on 23rd December, were all found washed up 8 miles away at St. Leonards - 60465 was found dead, 60466 was found alive and delivered to Trevor Pescott and several days later returned to Wedge-Light by Jack Wheeler, 60468 had a broken wing and died next day, 60464 was found alive and later handed by the Fisheries & Wildlife to Mr & Mrs Smeelie of Portarlington to rear. They called the bird Albert and being only 55 days old, still had considerable amount of down about the head, breast and lower back. Mr Smeelie was a fisherman and able to keep Albert with a good supply of fish but there were days when Mr Smeelie was unable to put to sea and Mrs Smeelie purchased small fish from boys fishing along the pier, and also on occasions purchased bullocks hearts from the local butcher. On certain days when it was hot, Albert enjoyed getting under the garden hose and when all soaked, exercised his wings to some order. By mid-March, Albert was fully developed and attired in lovely mottled grey-white plumage. On March 19th he was reintroduced to the sea but each time he took off flew around to come back to the Smeelies. They didn't have the heart to leave Albert on the beach, so back home he went to his backyard life once more.

Albert was growing very restless and did much wing exercise. On 30th March, a second attempt was made to dispose of Albert, and depositing him at the waters edge on the beach at Portarlington, he went through a thorough wetting of sea water and then without much effort, took off and headed right out to sea to join up with others of his kind. The Smeelies are to be congratulated on a job well done.

* * * * * *

NADGEE REDISCOVERED

By Bert Keith

FATEFUL MEETING

It was quite by accident that I came upon a large group of members of the Caloola Club, a Sydney bushwalking group, on the Bogong High Plains nearly 20 years ago. We were going the same way, I was impressed with their methods, and I became a member, which for many years meant simply receiving their bulletins and envying their exploits in various parts of New South Wales.

But when, in 1959, the literature again mentioned Victoria, I immediately took steps to join the party. The intention this time was to conduct a large-scale nature survey in the Nadgee reserve, an area in the farthest south-east corner of N.S.W., meeting Victoria at Cape Howe. In order to take in a large quantity of supplies and materials for two or three camp centres, it was planned to go by launch from Mallacoota, Vic., and be landed on the beach at Nadgee Bay.

BEST-LAID SCHEMES

Simple enough! But, equally simply, a heavy nor'easterly sea, persisting for weeks, ruled out landings by dinghy. Even a sea-sick land-lubber could see that! We spent most of our time on Gabo Island, waiting in vain for a change of weather, pleasantly enough, but rather cramped, and disappointed.

Three years later an entry was made by land from the Wonboyne or northern end. Supplies this time were conveyed in rucksacks, plus a special delivery by Land Rover just when we were beginning to live off the land - none too affluently.

REALIZATION

So at last I saw this strip of country about which my friends had spoken so enthusiastically. It is not a large area, being about 30 miles from north to south and only five or six miles deep inland, thus comparable in size with Wilson's Promontory. There are three distinct environments: a spectacular rocky coastline with beaches dotted along it; vast and inspiring areas of heathland, a wealth of colour in the spring; and westward the ridges and creeks running down from 1500 feet or so, clothed with open forests of bloodwoods, stringybark, grey gum etc., the home of wallabies and the large forester kangaroo. The creeks

NADGEE REDISCOVERED (Cont'd.)

tend to be blocked at the coast by sand bars, forming lagoons, of which Salt Lake is the largest, ideal breeding grounds for water birds.

Our survey was made almost entirely within earshot of the surf. The leaders were specially anxious to identify the ground parrot, which was once thought to be extinct and is still quite rare. In a sweep by about 30 people spread across the moors, a few parrots were in fact sighted. Observations of many other species were listed, collated and returned to Sydney, and I did not hear much of the conclusions. It had been a pleasant walking holiday in good company and unspoilt country.

Any good trip is worth repeating at least once, and for years I cherished the idea of returning to Nadgee. Last January the dream came true when a party of boys and men from the Geelong College arranged to spend several days there. We were all experienced walkers and campers, and one of the boys was a skilled bird observer.

SURPRISE

When we reached the Merrika River after a long day's travel from Geelong, we were surprised to find the reserve under full-time management, entry being by permit and by quota. Fortunately our credentials were acceptable and we were soon on the best of terms with the Ranger. And so, as well as doing what we had planned, we were able to observe this attempt by the N.S.W. National Parks and Wildlife Service to preserve for ever a specimen of primitive Australian bush and coastland.

We read their documents. "You are expected to conduct yourself in a Nature Reserve as would be required of you in a Museum or an Art Gallery. It is not a place for games and sports. Your entry into the Reserve is considered to indicate an agreement by you to abide by the laws and regulations provided to protect the natural values..." There must be "substantial proof of bona fide interest and purpose in natural history and wilderness, and capacity to care for the bushlands." No unnecessary noise; no dogs, firearms etc. Camp, walk and light fires only as authorized.

NATURE TRAILS

Coldly awesome as this may sound, the College party found itself in no way cramped. It became clear that natural history groups are specially welcome. The permitted camp sites are beautifully grassed and surrounded by magnificent trees. The Ranger is working, as time

NADGEE REDISCOVERED (Cont'd.)

permits, to develop a network of nature trails. The coast, in addition to brilliantly coloured walks, and its own bird life, can provide the odd bream or parrot fish to eke out the iron rations.

Our walking tracks criss-crossed the area for about 80 miles. We went to Cape Howe and saw the wreck of an old freighter which ran right up on the rocks with her anchors stowed. (On the way, we carried eight-pound steel stakes to help the Ranger extend his trail in that direction.) At the Cape, the tall, pink granite tower of the Gabo Island lighthouse seemed an arm's length away.

Despite the dry conditions, there were a few orchids in the bush; also ticks and leaches. We listed our birds, including fifteen sightings of the ground parrot over a wide area. Our almost constant companions were the red-bellied black snakes and the Lyre birds, both beautiful, shy creatures, equally enjoying sanctuary in this antipodean other Eden.

THE CHOIR INVISIBLE

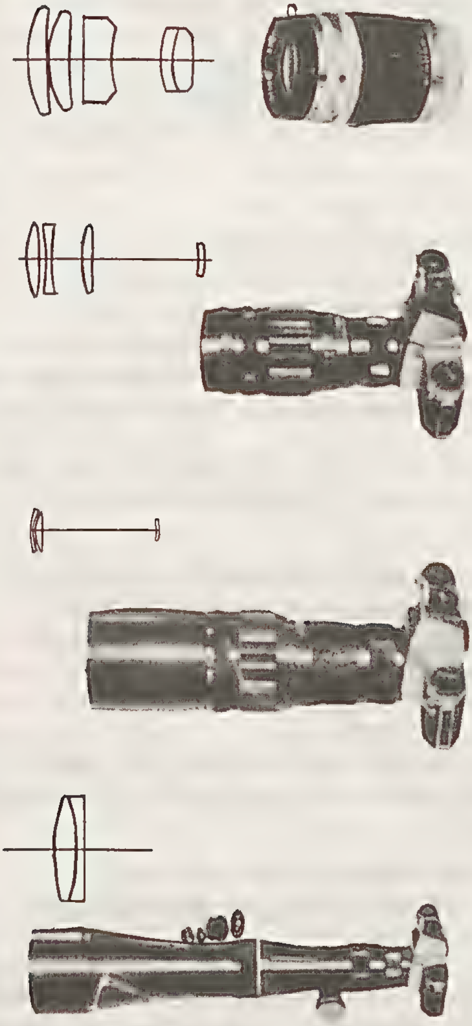
The final highlight was a long sweep into the mountains along the western border of the reserve on a perfect day, which yielded everchanging views of bush and coastline in two States, green, blue, gold and white. Inland, tier upon tier of forest ascended towards the Australian Alps. That day we saw more ground parrots and lunched to the superb and sustained accompaniment of a choir of lyre birds.

Nadgee, like the rest of south-eastern Australia, has been very dry. When on the move, we normally carried water for our midday meal. Soon after our departure the area became so dry that it was necessary to close it to visitors. Fire danger was high: in February a fire near Cann River in Victoria, if it had been turned by a strong sou'westerly, could have swept across the border to the N.S.W. coast.

TOO LITTLE, TOO LATE?

Can the Nadgee project succeed? The problem is to preserve it FOR posterity and at the same time to preserve it FROM posterity. Does access mean ruin? It seems necessary to admit that "virgin bush" is already a thing of the past, but this in itself is no final reason for despair, since damaged areas can be repopulated provided the damage does not go too far too often.

PHOTOGRAPHERS!



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NADGEE REDISCOVERED (Cont'd.)

One serious question is whether the area is large enough to withstand the onslaughts of the centuries to come. No part is out of sight of the perimeter, given sufficient altitude. The remotest gullies are less than 20 miles from the Prince's Highway, fishing grounds, and holiday resorts to north and south. Oil slicks pollute the beaches on the east and cattle wander in from south and west. A brilliant piece of interstate co-operation could be to link Nadgee to an extended form of the Mallacoota Inlet National Park in Victoria.

ACTION

The responsible authorities are making some gains, as witness the comparatively few serious fires in a potentially catastrophic year. There is stronger reason to fear the developer, the automobile, the motel and the shooter. The urgent need is to define sufficient typical areas, to manage them in such a way as to protect them, and yet to make them accessible under control.

This is not a new idea. It has been carried out already in the Kruger National Park in South Africa and in various parts of the United States.

But let us be smart about staking out our samples of primitive Australia for such protection. Resumption afterwards - too little, too late, at a high cost - is unsatisfactory, as the Geelong Field Naturalists have already discovered.

We of the Geelong College received thanks and praise for our report, which was sent on to Sydney, and were cordially invited to come again, a tempting thought.

Can there be any better method of furthering the aims of conservation than by the education of the younger generation?

BIRD LIST

The list which follows was compiled by Ian Baird, who emphasizes that it would have been considerably larger if the trip had been concerned solely with ornithology. Many species sighted were not positively identified and have therefore not been included.

Ground Parrot - Pezoporus wallicus
King Parrot - Aprosmictus scapularis
Crimson Rosella - Platycercus elegans

NADGEE REDISCOVERED (Cont'd.)

Yellow-tailed Black Cockatoo - Calyptorhynchus funereus
Spine-tailed Swift - Hirundapus caudacutus (Large flock)
Welcome Swallow - Hirundo neoxena
Fairy Martin - Hylochelidon ariel
Wonga Pigeon - Leucosarcia melanoleuca
Brush Bronzewing Pigeon - Phaps elegans
Yellow Robin - Eopsaltria australis
Scarlet Robin - Petroica multicolor
Superb Lyrebird - Menura superba
Rufous Fantail - Rhipidura rufifrons
Grey Fantail - Rhipidura fuliginosa
Leaden Flycatcher - Myiagra rubecula
Little Wattlebird - Anthaechaera chrysoptera
Eastern Spinebill - Acanthorhynchus tenuirostris
Tawny-crowned Honeyeater - Gliciphila melanops
Bearded Honeyeater - Meliornis novae-hollandiae
Eastern Shriketit - Falcunculus frontatus
Kookaburra - Dacelo gigas
Pallid Cuckoo - Cuculus pallidus
Fan-tailed Cuckoo - Cacomantis pyrrhophanus
Boobook Owl - Ninox boobook
Grey Shrike-thrush - Colluricincla harmonica
Southern Emu-wren - Stipiturus malachurus
Eastern whipbird - Psophodes olivaceus
Rufous Whistler - Pachycephala rufiventris
Golden Whistler - Pachycephala pectoralis
Black-faced Cuckoo-Shrike - Coracina novae hollandiae
White-breasted Sea Eagle - Haliaetus leucogaster
Dusky Woodswallow - Artamus cyanopterus
Red-browed Finch - Aegintha temporalis
Brown treecreeper - Climacteris picumnus
Grey Butcher Bird - Cracticus torquatus
Australian Pipit - Anthus australis
Grey-backed Silvereye - Zosterops halmaturina (nest and eggs)
Australian Pelican - Pelecanus conspicullatus
Australian Gannet - Sula serrator
Silver Gull - Larus novae hollandiae
Spur-winged Plover - Lobibyx novae-hollandiae
White-faced Heron - Notophoyx novae hollandiae
Black Swan - Cygnus atratus

NADGEE REDISCOVERED (Cont'd.)

Red-necked Avocet - Recurvivostra novae hollandiae
Hooded Dotterel - Charadrius cucullatus
Red-capped Dotterel - Charadrius alexandrinus
Black Duck -- Anas superciliosa
Pied Oystercatcher - Haemalopus ostralegus
Little Tern - Sterna albifrons
Crested Tern - Sterna bergii
Black Cormorant - Phalocrocorax carbo
Little Pied Cormorant - Phalocrocorax melanoleucos
White-eared Honeyeater - Meliphaga leucotis
Yellow-faced Honeyeater - Meliphaga chrysops
White-browed Scrub Wren - Sericornis frontalis
Red Wattle Bird - Anthochaera carunculata

Many beach washed Mutton birds
Also beach washed Fairy Penguin
A few dead Black Swans around Salt Lake and occasionally on beaches.
Quail species sighted.
Sandpiper species seen on Salt Lake. Also a solitary Snipe species.
Some King Parrots were in immature plumage.

* * * * *

NANKEEN NIGHT HERON ROOKERY ENLARGES

By Jack Wheeler

The Nankeen Night Herons of Queens Park have had housing problems and have had to increase their breeding rookery to other groups of Mediteranean 'stone pines', now six in all. Nesting this last season commenced early in September when six nests were then in use. Young were noted in the nests by mid-October and by early December at least 14 nests were in occupation. The extension of the rookery southwards to three more groups of nut pines was then evident and later increased the total nests to 22. However gale force winds and summer heat took their toll, especially that tragic fire day January 8th. The staff of Queens Park have counted over thirty dead young during the past few months.

However, some were reared and during my last visit there, three strong almost fully fledged young were noted in one tree of the new area. By remains under the nest tree, the young were being fed on elvers, small redfin and a small fish yet to be identified.

FORESTERS IN TRAINING

By Peter Fagg (Forester)

The Geelong Field Naturalists' Club intends to visit the Victorian School of Forestry early in 1969. This short introduction to the School may, therefore, be of interest.

Forestry is the protection, management, and use of one of our great natural resources. Forests produce timber, safeguard water catchements, protect and hold the soil, provide recreation for the people, and provide for wildlife habitation. The forester's job then, is of national importance.

The Forests Commission, Victoria, trains its own officers at this School, in Creswick, eleven miles north of Ballarat on the Daylesford road. The School was established in 1910 in the buildings of the former Creswick Hospital. It lies within 20 acres of grounds, some 11 acres of which are properly landscaped. Hundreds of different shrub and tree species, many being labelled, make for a delightfully green setting.

The School manages its own pine plantations and eucalypt forest (including a koala sanctuary); these total about 1800 acres. An up-to-date physics, chemistry, and forest research laboratory complex, opened in November 1968, is a recent, valuable addition to the School's training facilities.

The V.S.F. has a staff consisting of a principal, four resident lecurers, and several visiting lecturers.

Subjects studied are: First Year - Botany, Geology, Physics Chemistry.
Second Year - Soils, Statistics, Mensuration, Surveying, Management, Pathology, and others.
Third Year - Economics, Silviculture, Wood Technology, Fire Protection, Engineering, Entomology, and others.

Each year, approximately 10 boys are awarded the comprehensive scholarships for the 3-year course. Successful students are awarded the Associate Diploma of the School of Forestry, Creswick [A.Dip.For. (Cres.)]. Many graduates have attained important positions in forestry and the timber industry, not only in Victoria, but throughout Australia.

At Random

NOTES ON SWIFTS - Compiled by Trevor Pescott, Belmont.

There have been a number of interesting observations made on Swifts this year, and these have been listed below as they constitute some valuable records; these birds are currently under study by Melbourne ornithologists, and any further observations should be sent to Mr. K. Simpson, c/o National Museum, Melbourne 3000, or Mr. R. Wheeler, M.B.E., 59A Upton Road, Windsor 3181.

19/1/69 Otways (5 miles E. of Forrest) Two SPINE-TAILS flying low over tall timber, direction S.E. 3.30p.m. weather - fine, hot, calm. (Observer - Trevor Pescott)

26/1/69 Blackwood. About 6.00a.m., a flock of several hundred SPINE-TAILS were noted circling over the mountains, flying at a height of perhaps 1000 ft. They were calling with a twittering note very like a flock of Sittellas. The weather was calm and cool, and quite cloudless, although a wind sprang up about 8.00a.m., and the sky clouded over. None appeared on 27/1/69, although a watch was made from 5.00a.m. to 9.00a.m. (Observer - Trevor Pescott)

On the same day (26/1) FORK-TAILS were seen over Port Campbell. (Observer - J. & T. Wheeler)

11/2/69 Belmont. FORK-TAILS recorded. (Observers - J. & T. Wheeler)

3/3/69 Belmont. A large flock of several hundred FORK-TAILS was seen over Belmont, flying in a northerly direction; most were flying fairly low, and identification was made easy for whenever the birds banked after catching an insect, the forked tail was shown to advantage (Observers - J. & T. Wheeler)

A [illegible] flock was seen at the You Yangs (Observers - Mr & Mrs J.

AT RANDOM (Cont'd.)

9/3/69 Gum Flat, Anglesea. A few birds (SPINE-TAILS) flew overhead at several hundred feet altitude, during the mid-afternoon (3.30 to 4.30p.m.). A winged bull ant which had lost its abdomen was found on the ground, possibly having been dropped by the birds. Weather was hot, clear and calm. (Observer - Trevor Pescott)

10/3/69 Cape Otway. A flock of FORK-TAILS and two flocks of SPINE-TAILS, each of up to 500 birds, were seen circling low around the cliffs and low vegetation, and amongst the stunted trees, at varying heights from 10 to 1000 feet above the observer. This was late afternoon; weather - fine, warm (70° to 75°), slight breeze, whispy cloud.

The birds were feeding, circling, and drifted towards Apollo Bay, following the coastline.

SPINE-TAILS were heard to make a twittering call.

FORK-TAILS held tail closed when they dived after an insect, slightly fanned the tail to show the deep, swallow-like fork in it as they levelled out, then folded the tail again as they returned to their original elevation. (Observer - Geoff Gayner)

10/3/69 Belmont. Throughout the day, large numbers of FORK-TAILS, TREE MARTINS and WELCOME SWALLOWS were feeding over the Barwon Valley and over Belmont immediately south. There was a light north wind which was apparently causing air currents to rise up the steep slope south of the valley, and it was on this up-draught that the birds were feeding. First seen about 11.00a.m., they remained throughout the day, feeding at altitudes from 50 feet to several thousand where they were visible only through binoculars. Weather was hot, cloud building up, light north wind. (Observer - Trevor Pescott)

FORK-TAILS were also observed on the east side of Belmont on this same day. (Observer - J. Wheeler)

11/3/69 West Geelong. SPINE-TAILS flying to the north west at 4.30 to 6.00p.m.; there were many birds. (Observer - Cliff Tingate).

Highton. Thousands of swifts flying north about 6.00p.m. (Observer - Mrs. Higgins)

Weather had been hot; there was a fierce electrical storm over Geelong about 7.30 to 8.00p.m.

AT RANDOM (Cont'd.)

12/3/69 Ocean Grove. At least 200 FORK-TAILS circled over the Nature Reserve for a period of more than two hours. (Observer - Jack Wheeler)

7/4/69 Otways (5 miles E. of Forrest) On the previous mornings (4th, 5th, 6th) and on the evenings of 5th and 6th, a few SPINE-TAILS were seen flying N.W. over Lake Elizabeth. This morning (7th) at 8.20a.m., about 20 birds appeared overhead, circling at about 500 feet altitude above our position (elev. 1500' A.S.L.) These birds were calling a twittering note, again so like sittellas that I looked into the trees first. They disappeared after about 1/4 hour, but I could not see which way they flew. Weather fine, mild, light W. winds. (Observer - Trevor Pescott)

9/4/69 Ballarat. Flocks of hundreds of FORK-TAILS were seen over the Ballarat High School; all birds were moving in a northerly direction. (Observer - Roger Thomas)

10/4/69 Western Beach, Geelong. One FORK-TAIL flying north along the beach, 10.00a.m. Weather hot, blustery, strong N.W. wind. (Observer - Trevor Pescott)

Later in the day, a large flock of FORK-TAILS was seen over Belmont, and over Breakwater - time 4.15p.m. These birds were flying very high, and fast in a northerly direction. The weather now changed, the wind swinging more southerly, and a cold front passed over Geelong. (Observers - Mrs. J. Wheeler, H.B. & Trevor Pescott)

About an hour later - time 5.15p.m. - many birds were seen flying past the vehicles on the Melbourne-Geelong road; these, too, were FORK-TAILS, and they were flying at less than 100 feet above the ground, moving very fast in a northerly direction, directly ahead of the cool front. They were not feeding, and appeared to be moving in pairs. (Observer - Geoff Gayner)

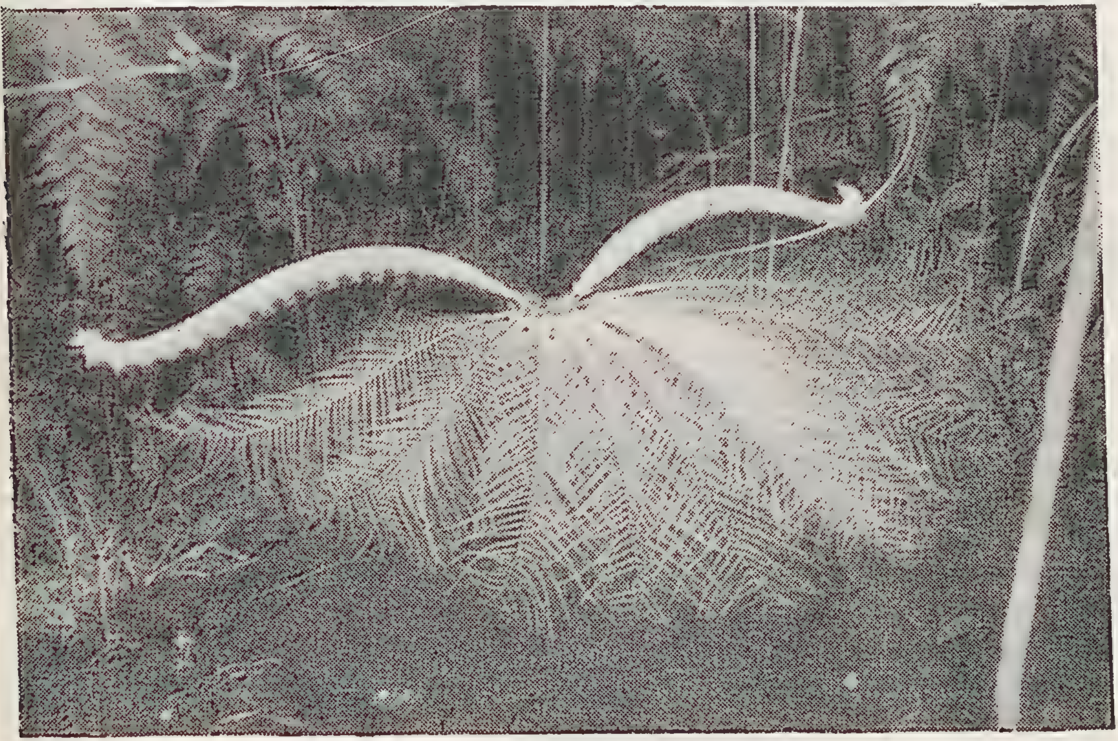
The following comments are from Jack & Trix Wheeler, Belmont.
Results of Swift observations throughout Australia each year, reveal that Spine-tailed swifts are sighted in the order of 8 to 12 to every sighting of Fork-tails. The B.O.C. records for the season 1966-7, Spine-tailed swifts 562 reports as to Fork-tails 47, whilst in 1967-8, the reports were 482 to 60 respectively. Geelong and district reports would follow a similar pattern, but this year there were fewer Spine-tail reports than those of Fork-tails. Previous to this season, our reports of Fork-tails have only been made in the years 1954, 55,58,60,64 & 65. Of these the most spectacular was at Anglesea on 2/1/55 when we observed a flock of over 2,000 hawking insects low over the road in 95° heat, just prior to a cool change.

Junior Pages

THE SUPERB LYREBIRD

With the winter approaching, the Superb Lyrebird (Menura novae-hollandiae) will be preparing to nest, and to raise its one young in the large, domed nest built in a secluded part of the forest. In May and June, the male Lyrebird builds a mound amid a thicket of ferns, and here he dances and sings, courting his mate, and declaring his territory.

It is the female that builds the nest, incubates the egg, and rears the youngster, while her mate defends their territory of forest from



Adult male Superb Lyrebird in full display, Sherbrooke Forest.

JUNIOR PAGES (Cont'd.)

other Lyrebirds. The display is more than just a courtship dance - although this is one important reason for it - it is through the song that the male tells other Lyrebirds that this section of the forest is his, and any others which enter his territory will be attacked and driven off.

The male rarely, if ever, visits the nest, but his work is every bit as important as the females', for once the chick hatches, the father must keep other Lyrebirds out of his part of the forest; his mate is busy collecting the huge amount of food their young needs, and they can not afford to share the forest now, because the food supply must be retained.

By mid spring, the young bird has left the nest, and during the months that follow, he is taught by his mother to feed, to recognise danger, and to sing.

Summer is the hardest time of the year for Lyrebirds, for then food is scarce, and the ground becomes hard and dry. The long, beautiful tail of the male is moulted along with the other feathers during this time of the year, but by autumn, the Lyrebirds are again ready to start the year again.

The best place to see Lyrebirds is at Sherbrooke Forest, in the Dandenong Ranges beyond Melbourne; and a calm, dull morning is the best time.

Junior members, please note:

These last two pages are for you; they are set aside to give you space to publish your observations, letters or notes. Please write to the Honorary Editor whose address is shown opposite.

Do not forget the Junior Lectures, held before each monthly meeting of the Geelong Field Naturalists Club.

* * * * * *

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Journal of the Geelong Field Naturalists Club

"Toadstools at Macedon"

Hon. Editor: Trevor Pescott

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

MEMBERSHIP

Membership of the G.F.N.C. is open to any person interested in Natural History. The 'Geelong Naturalist' is distributed free to all members, and the Club's reference and lending library is available.

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COVER PHOTOGRAPH:

Toadstools at Macedon

Photo. by Gordon McCarthy.

GEELONG NATURALIST

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EDITORIAL

As we were preparing this issue of Geelong Naturalist for the Printer, news came through of the State Government's decision to open a first stage in the development of the Little Desert.

Knowing the policy of our Minister for Lands, this was not entirely unexpected, although disappointment has been voiced by many who believe the entire Little Desert should be declared a National Park.

The only concession made by the Minister after a huge storm of protest is that advice of wildlife and conservation experts would be sought in the selection of the site for a National Park of 80,000 acres.

But on his own admission, and confirmed by his actions regarding the Lower Glenelg area, the Minister would rather accept the advice of "practical farmers" than of experts.

On the surface we are back where we started before the controversy began, without any material gain; the huge gain conservation has had is in publicity, for it has been shown that all groups of the general public can be roused to denounce development projects thought not to be in this State's best interests.

As was stated recently, land declared a National Park is irretrievably lost to future development, as surely as bulldozed land is to preservatio

So even if the development of the Little Desert is held to 48,000 acres, it will take a tremendous effort to have much more than 80,000 acres declared a Park. The respite given us by the decision to open initially only a first stage must be used by conservationists to renew demands for a larger permanent reservation, and by naturalists to carry out ecological surveys of the Little Desert.

TREVOR PESCOTT,
Hon. Editor.

MT. MACEDON CAMPOUT, MAY 1969

JACK WHEELER

For the second year in succession, a Club weekend was undertaken to Mt. Macedon with our headquarters at "The Bungalow" under the management of Mr. & Mrs. H. & M. Schwarz and sons Mark and Michael, all enthusiastic members of this Club. Situated in Devonshire Lane under the shadow of Mt. Macedon, the locality is a delightful one, being the centre of large gardens noted for their beautiful exotic trees and coinciding with the time of our visit, the 'autumn tints' provided a scene of great beauty. Apart from the exotic trees and shrubs, the natural bush scene of towering eucalypts adds to the attractiveness of Mt. Macedon.

Our visit this year was three weeks earlier than the corresponding visit of 1968, when it was too cold for it to snow and the earths surface became encrusted in ice. For this visit we had very favourable weather with a maximum of sunshine and moderate autumn temperatures.

Forty three members and friends were accommodated at The Bungalow and a very homely atmosphere prevailed; the amenities (recreation) room was ever popular with the younger folk, and the billiard and table tennis tables, and also the piano, were in constant use during periods of relaxation.

Our itinerary was as follows:

Friday evening: Spotlight hike. Films and slides by Owen Andrews and Arthur Chapman. Supper.

Saturday - Morning: Pre-breakfast hike. After breakfast - hike to Camel's Hump (Leaders Mr. Scott and Mr. McCarthy). Those not hiking were taken up to 'The Cross' and later met the hikers at the Hump.

Afternoon: Car trip to Hanging Rock. The return trip was made via Macedon with a call at the State Nursery to see the 'fly agaric' fungi.

Evening: Junior Quiz: Winners - Girls - Lynor Barr. Boys - Glen McCarthy and Dallas Barr. Then followed a members film evening. Guests Mr. & Mrs. Marco Spek also showed slides of Switzerland and Mt. Macedon. Supper.

Sunday: Pre-breakfast hike. After breakfast - official photograph. Visit to local gardens, Forest Glade and Ardrudah.

Afternoon: Visit to Civil Defence Headquarters - Leader Mr. Scott. Return 3.30p.m. special afternoon tea - presentation

MT. MACEDON CAMPOUT (Cont'd.)

to Mr. & Mrs. Schwarz and family by Mr. Goding and supported by Mr. Wheeler.

My personal thanks to members for their co-operation in carrying out roster duties, setting tables, waiting on tables and washing up - also to those who so unselfishly provided transport to others. In all a very delightful weekend.

Personnel list:
Mr. O. Andrews, Miss M. Arthur, Mr. & Mrs. S. Barr, Dallas Barr, Lynor Barr, Meralyn Barr, Mrs. A. Buzaid, Mrs. B. Campbell, Phillip Campbell, Mr. A. Chapman, Mr. & Mrs. E.G. Errey, Robyn Errey, Mr. & Mrs. A. Goding, Mr. A. Grant, Mr. & Mrs. F. Grueber, Helen Grueber, Rosemary Grueber, Miss Hickman, Mr. & Mrs. G. McCarthy, Glen McCarthy, Jill McCarthy, Miss E. Poole, Miss F. Poole, Mrs. B. Quirk, Mrs. L. Rowe, Mrs. F. Singleton, Miss M. Slavin, Miss K. Stoddart, Miss Walker, Mr. & Mrs. J.R. Wheeler, Mr. & Mrs. J. Whitmore, Mr. L. Wilkinson, Mr. & Mrs. R. Wood, Mr. I. Woodland, Mrs. E. Yeoman.
Visitors: Miss I. Laugher, Mr. & Mrs. H. Dunn, Peter Dunn, Jeffrey Dunn, Lindsay Dunn, Mr. & Mrs. Bell, Mr. & Mrs. Crookshank and family, Mr. & Mrs. Marco Spek.

* * * * *

BONESEED

BY JACK WHEELER

The recent announcement by the Victorian Government, that South African Bone-seed had been declared a noxious weed was received very favourably by naturalists. The credit must be taken by the several societies, clubs and the Committee of Management of the You Yangs Forest Park for their continued efforts in bringing details of the rapid spread of this curse in many parts of this State, under the notice of proper authorities.

It will probably take several years before the full impact of eradication of this pest is fully effective, as much as cost is involved, and much more research will have to be undertaken on control.

In the meantime I would very much appreciate the continued efforts of those interested to continue pulling at every opportunity. Such methods have been successful in controlling the spread of bone-seed in certain areas of the You Yangs.

MT. MACEDON CAMPOUT - SOME GENERAL NOTES CHIEFLY BOTANICAL

TED ERREY

Mount Macedon was climbed and named by Major Thomas Mitchell during his explorations across Australia Felix in 1836, though Hume and Hovell twelve years earlier had given it the name of Mt. Wentworth.

In his account of this section of the journey Mitchell wrote:-

> I ascended without having been obliged to quit my horse's back, and I found that the summit was very spacious being covered toward the south with the tee-fern and musk plant growing in great profusion. .... The summit was full of wambat holes, (his spelling) and, unlike the side of the mountain by which I had ascended, was covered with the dead trunks of enormous trees in all stages of decay.

Mitchell had hoped for a sighting of Port Phillip from the top of the mountain in order to establish his position more accurately, but he found this was impossible because of the dense vegetation. Not till he was well down the side again did the bay come into clear view. Because Philip was king of Macedon in the fourth century B.C., the mountain received its present name owing to a peculiar association of ideas on Mitchell's part, though he wrote, "Geboor is the native name of this hill and is a much better one."

Settlement of the area began in 1837, and in the gold-rush days of the fifties the Black Forest between Gisborne and Woodend was the lurking place of bushrangers interested in the coaches plying from Bendigo and Melbourne.

THE GEOLOGICAL ASPECT

The mount itself was formed in Devonian times approximately 300 million years ago, and when one remembers that modern man is reckoned to have developed only 20,000 to 30,000 years back, these formations must be considered really ancient. In those times land plants in the form of ferns, early conifers and club mosses had not long evolved, and the first amphibians were leaving the water and making tentative excursions on dry land.

Probably neither plants nor animals had reached that area when the light-coloured Devonian lava was forced out along fissures in the unstabilized crust of the earth to form the long ridge known as Mount Macedon. The hills of the Marysville district where we

MT. MACEDON - SOME GENERAL NOTES (Cont'd.)

enjoyed our week-end last October were formed in much the same way, and the rhyolite in evidence at our original camp-out at Rocklands is a related rock.

These light-coloured lavas were generally viscous and did not flow over the countryside as the more fluid basalts did. Instead, they tended to pile up into steep-sided mounds known as mamelons, and this explains the peculiar formation of the Camel's Hump on top of Mount Macedon and of the Hanging Rock a few miles to the north. The grey lava of these two features is known as solvsbergite, presumably deriving the name from Solvsberg in southern Sweden.

At the top of Hanging Rock there is much evidence of erosion, numbers of the boulders being deeply scoured out by the action of wind and swirling grit. These formations have been "case-hardened" by chemical action. Soluble mineral salts within the rock were, over the centuries, brought to the surface by capillary action. There the water evaporated, and the minerals left behind cemented the grains of the outer layers of the boulders. Once this casing is breached by the elements, the comparativel softer inner material erodes more rapidly, hence the cave-forms that attracted so much notice.

In contrast to the violent upheavals and volcanic activities of those far-off times, the outpourings of lava that formed the great basalt plains of western Victoria took place but yesterday, approaching within ten thousand years of the present.

By that period, plant and animal life had achieved the stage of development that greeted the first European visitors to this continent, and the aborigines were firmly established.

AUTUMN

As our week-end at Mount Macedon was spent at the end of autumn, the native flora was in its least interesting phase. In fact, almost the only colour was provided by the deciduous trees introduced from the northern hemisphere, the dying leaves of which produced in their last hours a range of sunset hues as if in some degree to compensate in advance for the stark bareness through the drear winter months ahead.

Autumn being the time of fruitfulness, it was to be expected that native berries would be in evidence. The Prickly Currant Bush was found bearin quite a crop of its small red fruit. These are sweet to the taste, but being only an eighth of an inch in diameter they are more attractive to

MT. MACEDON - SOME GENERAL NOTES (Cont'd.)

the birds than to humans. This plant is a member of the coprosma genus, so it is related to the New Zealand looking-glass bush, frequently used as a hedge plant in Victoria. Another native, the Rough Coprosma, is also found in the Macedon area. The berries of this shrub are larger, up to a third of an inch in size. Coprosmas bear unisexual flowers - that is, the male pollen-bearing stamens, and the female stigma and ovary are on separate flowers. (She-oaks sometimes go a step further and segregate the sexes on different trees.)

During the Saturday morning walk to the Camel's Hump, the Tasman Flax-lily was found with a display of rich blue berries rather like the fruit of the Purple Apple-berry met with at Marysville last October. The Flax-lillies are tussocky plants with leaves resembling those of the Saw-sedges, though not quite so harsh. They do well as garden subjects, sending up tough thin flower-stalks in the summer to hold aloft the starry blue flowers. The plants increase by means of creeping underground stems, coming up often several feet from the parent plant.

Large clumps of Thatch Saw-sedge grew among the Eucalypts on open hillsides. The long dark brown seed-plumes, on stems five or six feet in length, are often used in large floral arrangements, though the collecting of these can result in deep skin cuts from the very sharp leaf edges.

THE EUCALYPTS

Close to The Bungalow many fine specimens of Messmate grew by the roadside, some being the headquarters, at least temporarily, of koalas, judging by the evidence on the ground beneath. These trees, some with huge trunks, were well over a hundred feet high. To the east of the township we found a slim Messmate that had been uprooted apparently by a recent storm. Though its diameter at stump height was no more than two feet, the tree measured 120 feet in length. On its way to earth it had snapped off a neighbour of similar size ten feet from the ground.

In the same locality Manna Gums grew to perfection. They were in the process of shedding their bark, great brown streamers hung in profusion, and the newly peeled trunks and branches gleamed frosty white in the morning sun. On strip a foot in width had come adrift above the first huge branches some sixty or seventy feet up. The

MT. MACEDON - SOME GENERAL NOTES (Cont'd.)

lower end was still attached to the trunk where the rough bark ended about 25 feet from the ground.

Contrasting sharply with these were the rather stunted specimens growing on top of Hanging Rock. This exposed position, and the dryness of the soil due to the different drainage conditions, naturally inhibited such vigorous growth as was found at lower levels.

A similar variation could be seen among the Snow Gums on Mount Macedon itself. On the windswept Camel's Hump the trees could not be compared with the admirable stand to be found in the vicinity of the Cross. Both groups, however, showed the same attractive bark colouration.

One particular Manna Gum on Hanging Rock drew my attention. Though it was a spreading tree twenty feet or so in height, all the foliage was of juvenile form, narrow and opposite in habit. Whether the leaves had been stripped by insect infestation and all growth was new I could not decide.

SMALLER PLANTS

Near the top of Hanging Rock, where the steep climb up the southern face levels off, the path meanders across a damp grassy area. Here Bluebells showed bright spots of colour among the tall herbage.

Seepage in roadside drains provided ideal habitats for Prunella, or Self-heal, a low spreading plant that delights in wet places. The purple-blue flowers in squarish clusters are nearly always present. The upper petals form tiny hoods over the flowers which peep out between the browny-green calyces.

Plants in high rainfall districts such as this grow luxuriantly, and, especially where creepers are present, very dense tangles are frequently met. One example found on a back road had begun as a Christmas Bush. Over this was growing such a confusion of Clematis, Wiregrass and Appleberry that little of the original plant was visible. The Musk plant referred to by Major Mitchell is the tallest of our Olearias or Daisy-bushes. It is still known best as Musk, because of the leaf perfume, and it is still very common about the Mount. The lovely satin sheen on the underside of the foliage is revealed by every breeze.

OLD MAN'S BEARD

Clematis carried a profuse supply of seeds, some of which were collected for use elsewhere. Seedlings were plentiful; their distinctive foliage is purple underneath and has a silvery strip along the mid-rib on the

MT. MACEDON - SOME GENERAL NOTES (Cont'd.)

upper surface. The long white feathery plumes on the seeds have earned them the name of Old Man's Beard.

The same name is used for a very different plant, a lichen often found on dead twigs and branches. This was seen quite frequently during the week-end. Though not as fluffy as the Clematis seed, the Lichen is well named. Lichen, of course, is not a simple plant, but a combination of a fungus and an alga growing together for their mutual benefit. The alga could most likely do quite well on its own; the fungus could not, without the food-manufacturing facilities of the alga's chlorophyll.

GROUND COVER

Promise of spring flowers was seen in the developing buds of Varnish Wattle and Hazel Pomaderris. Among the smaller shrubs, Hop Goodenia, which we found so colourful at Marysville last October, and Rough Bush Pea, were to be seen.

There were ground cover plants too, though they were not as plentiful as in more open country. Violets, Forest Pennywort and Kidney-weed were common. The last of these is often mistaken for the first, but the leaves of Kidney-weed are noticeably indented at the stem, while those of Violets are not. Kidney-weed flowers are inconspicuous but the plant soon forms a thick mat in a damp shaded position.

Orchids did not appear to be plentiful during our brief visit to the district. The Gnat Orchid and the Blunt Tongue Greenhood were the only species found in flower. As Mosquito Orchids are usually found in association with the Gnats, a more careful search would almost certainly have found them both.

Another interesting shrub was the Tough Rice-flower, perhaps better known as the Bootlace Bush because its tough pliant bark has served many bushmen as a substitute for that important item. This shrub is common in the Otways, and is the tallest of our Pimeleas. The flowers appear along the branches in the leaf axils, instead of in nodding heads as with most of the smaller Rice-flowers.

All in all, the week-end was not a very exciting one from the botanical viewpoint, though the physical characteristics of the area provided much that was of great interest, and from the social angle our stay at The Bungalow was most enjoyable indeed.

MT. MACEDON - SOME GENERAL NOTES (Cont'd.)

Common and Botanical Names of the Plants Discussed (in the same order as in the article).

Prickly Currant Bush	Coprosma quadrifida
New Zealand Looking-glass Bush	Coprosma lucida
Rough Coprosma	Coprosma hirtella
She-oaks	Casuarina species
Tasman Flax-lily	Dianella tasmanica
Purple Apple-berry	Billardiera longiflora
Thatch Saw-sedge	Gahnia radula
Messmate	Eucalyptus obliqua
Manna Gums	" viminalis
Snow Gums	" pauciflora
Blue Bells	Wahlenbergia consimilis
Self-heal	Prunella vulgaris
Christmas Bush	Prostanthera lasianthos
Clematis	Clematis aristata
Forest Wiregrass	Tetrarrhena juncea
Appleberry	Billardiera scandens
Old Man's Beard Lichen	Usnea barbata
Varnish Wattle	Acacia verniciflua
Hazel Pomaderris	Pomaderris aspera
Hop Goodenia	Goodenia ovata
Rough Bush-pea	Pultenea scabra
Violets	Viola hederacea
Forest Pennywort	Hydrocotyle geranifolia
Kidney-weed	Dichondra repens
Tough Rice-flower (Bootlace Bush)	Pimelea axiflora
Gnat Orchid	Acianthus exsertus
Blunt Tongue Greenhood	Pterostylis obtusa
Mosquito Orchid	Acianthus reniformis

* * * * *

Groups at Mt. Macedon.

Photos. by Frances Poole.

MT. MACEDON FUNGI

GORDON MCCARTHY

Fungi observed during the Club's weekend excursion to Mt. Macedon, included indigenous species growing in the native bushland, and introduced species growing beneath the introduced trees, mainly the pines.

The greatest number and variety were evident during a hike through the bush to the "Camel's Hump". In one small area of a few square feet, five different varieties were counted, but alas, not identified. The most prolific were clumps of Coral Fungi (Clavariaceae). This particular example was the large pink and orange cauliflower-like Ramaria ochraceo-salmonicolor, growing in clumps six inches high and broad.

Among the gilled "Agarics" showing through the leaf mould and moss was a small yellow-brown, bell-like specimen Galera hypnorum . Two of our smallest agarics were noted growing on logs and tree trunks. The largest having 1/2" diam. grey white caps, was Mycena subgalericulata. The smallest, with caps not much bigger than pin heads, was Mycena subcapillaris.

Only one Earth Star (Gasteromycetae) was recorded. Bright orange and red bracket fungi brightened the decaying logs, which were also host to patches of white jelly fungi.

Two varieties of small bright yellow club-like fungi were discovered growing densely on small pieces of dead branch, they were thought to be varieties of Clavariaceae.

Blood red caps, covered with snow-white nodules, betrayed the beautiful, but poisonous, introduced Amanita muscaria, the Fly Agaric.

The remaining two introduced species are both edible. The Safron Milk Cap (Lactarius deliciosus) is a large orange-red fungi, with salmon orange gills. And Boletus luteus is also large, with a yellow-brown top, but in place of gills underneath, has yellow pores. The fungal threads of both these species have a symbiotic relationship with pine tree roots.

Members took the only way possible of preserving the beauty of these plants, that was with their cameras.

* * * * *

IT'S WORTH BEING STUCK IN THE MUD

VALDA DEDMAN

Some people might think it peculiar for a woman to spend an hour on a glorious autumn day creeping over smelly mud, and actually enjoy it. But this is exactly what I did last Easter at Eden, on the south coast of New South Wales.

Lake Curalo, in the low lying area behind the sand dunes, is a wildlife sanctuary and a haven for waterbirds. Normally the lake empties into the sea, but two years of drought had caused the outlet to be blocked by a sandhill, and lowered the water level to such an extent that beyond the reeds normally fringing the edge there was a large expanse of black mud, thick and rather smelly from decaying vegetation and water life. It was across this soft mud that I crept one morning, with binoculars and camera, for there was a great group of birds feeding in the shallow water, a study in black and white and grey against the blue of sky and lake.

The great attraction for most of them was a shoal of mullet and I could observe the different methods of feeding of the various species.

A pair of pelicans, two amiable giants, swam in the centre, thrusting their pink bills sideways into the water. As often as not the bills came up empty, but when a fish was caught, the birds would tilt back their great heads, and I could see a bulge move down out of the pouch into the throat.

The little pied cormorants were also swimming, submerged but for the curve of head and neck. From time to time even this would disappear into the water after a fish, to emerge a few minutes later and then jerk backwards and upwards as the catch was swallowed.

A royal spoonbill was there on the edge, moving quietly on strong dark legs and systematically seiving through the mud with his black shovel bill. The tall white egret, on the other hand, walked calmly along, pausing to look and listen; then the S-curve of its white neck would unfold and the yellowish beak-spear would jab forward into the shallow water. Sometimes it stood, on one leg, shoulders hunched, and it was only when it stretched to its full height that I realised what a tall bird it was, as big as the ibis.

Several white ibis steadily probed the mud with slender down-curved

IT'S WORTH BEING STUCK IN THE MUD (Cont'd.)

black beaks. The poor birds were harried all the time by the silver gulls, especially when they brought up a morsel tangled in green weed, which was therefore hard to swallow quickly. They were not above snapping at the gulls when the latter became too annoying, and I cannot say I blamed them. The gulls did not bother to forage for themselves.

To the side of the group a white-faced heron stood motionless, somewhat aloof. A slight breeze ruffled the fine soft-grey plumes on its back, and raised a crest on its head, thus making the contrast of its coffee coloured breast more noticeable. I felt it would rather have been fishing by itself.

As I approached ever closer the cormorants were the first to be alarmed. With a great flapping the whole group of twenty or more rose out of the water and flew to the other end of the lagoon. (The cormorants were always the most wary of all the birds unless there were spurwinged plover around to call the alarm.) Next the white-faced heron took off, to feed all alone across the water. I think he was happier this way.

I shifted my gaze to watch him, and then, barely discernible among the buff-white dead Australian horn shells left high and dry by the receding water, I caught sight of a group of red-capped dotterels. I knew them at once, for I had seen them before, one blustery day when they had come to the lagoon for shelter. There were fourteen or fifteen of them, mostly standing on one leg, bodies facing into the wind, but heads tucked back. Three or four were males with rusty heads and pale fronts; the rest, juveniles and females, were of more sober hue.

I turned to the main group again. The pelicans had sailed off by themselves, two majestic galleons. I did want a photo of them, as close as I could get without a telephoto lens, so on I crept, until, finding my presence intolerable, the ibis took off on beating wings, honking all the while. A repeated flap-flap-glide took them to the other end of the lake. The egret then flew off with a steady flap-flap of its wings, long legs trailing.

Finally, all but the gulls had gone. They were not particularly interested in me, nor I in them, so I set off in pursuit of the pelicans once more. Now they were standing, heavy bodies on short thick legs, in very shallow water half way up the lagoon. Slowly I moved along the edge of the water. The mud became blacker and tackier, and before long I had to abandon my thongs and walk barefooted in the soft ooze. Soon even that was too difficult to do without sinking and squelching, so I entered the shallow water and, camera held to my eye, ever so quietly

IT'S WORTH BEING STUCK IN THE MUD (Cont'd.)

walked sideways towards my "prey", trying to make no more noise than a plopping mullet. Those pelicans knew I was no fish, though, for every time I was just about close enough for a good "shot", they waddled a bit further away. Occasionally they gave their curious call, a low-throated honk like a door creaking in the middle of the night. I tried approaching more directly, through deeper water, but this was difficult as I was wearing rather tight jeans that were not easy to roll up, and every now and then I sank into a soft hole. I suppose I should have cared less about my trouser ends getting wet, for as I put a hand down to give a last desperate hitch, the pelicans decided the bobbing female was more than they could bear, and they took off on powerful wings and soared away high into the sky.

What a change of character! No more the comical clowns, waddling in the shallows, but lords of the air. Round and around they circled effortlessly, bills out-thrust, bodies no longer heavy, but tucked away in a curve. Their great wings were outspread and the primary feathers acted as aerofoils as they used the air currents to carry them up and up. Their majestic soaring reminded me of a wedgetailed eagle's flight, and then, to my delight, there was an eagle, just coming out of the bushland at the head of the lagoon. But the pelicans outsoared even him. I saw the eagle flap his wings once, but never while in the air did the pelicans beat their wings all the time I watched them.

Wedgetailed eagles seemed to be common in the area. I had often seen them round Lake Curalo, and at the Kiah estuary, a few miles away. At the Kiah, too, I had watched a pair of white-breasted sea eagles soar over the water, and land in a dead tree near the shore.

I watched the big birds until they were mere specks in the sky, then I came back to those at the end of the lagoon. Most of them had congregated on a spit of sand. There were my wary friends from the other end, but as well I could see a few chestnut teal huddled together. Two swans glided through the water, and a slaty-grey reef heron was fishing by itself. The eastern curlew was not about, seeking food with its curved beak, but a pair of pied oystercatchers were probing the mud with their blood-red beaks. I had seen all three at the Kiah the day before, together with a pair of terns I had wanted to have a closer look at. My luck was

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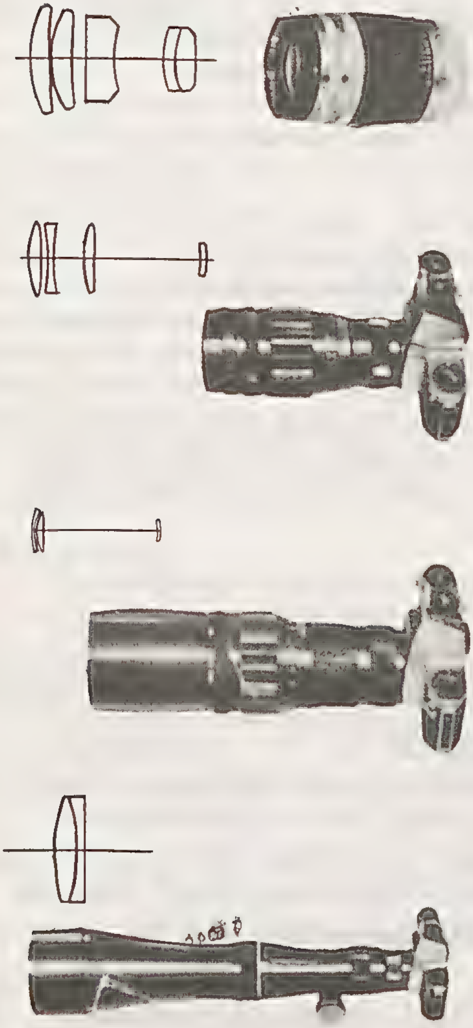


PICTURED ABOVE ARE LENSES FOR THE ASAHI PENTAX — FROM THE TOP — 135 mm, 200 mm, 300 mm, 500 mm

IT'S WORTH BEING STUCK IN THE MUD (Cont'd.)

in; now I saw them at the edge of the sandspit. I was certain they were Caspian terns because of their great size, thick red bills and dark legs, but their description did not quite tally with those in the books I had consulted. All my references said Caspian terns have black heads, but these two had only a black eye-stripe, although the top of the head was a somewhat darker grey than the soft clear grey of their bodies. Now and again they raised their wings skyward in typical tern fashion and I noted the dark tips.

For a long time I stood and drank in the scene, but eventually I had to go. I left behind the clink-chink song of the bellbirds in the bushland, but the reed warblers threaded their song through the rushes as I squelched through the mud back to the caravan park. Here the little wattle birds greeted me with their strange cry of "kicky-kocky", the wrens were chittering in the dense bushes and the willy wagtails scolded me noisily. My feet were covered with very tenacious black mud, but I did not care. My mind was full of impressions of a most happy hour. And I never did get that photo!

* * * * *

ULUPNA ISLAND TO BE FLORA & FAUNA RESERVE

BY JACK WHEELER

Advice has just been received from the Minister of Lands, The Hon. W.J.F. McDonald, that approximately 1750 acres, known as Ulupna Island situated in the Parishes of Ulupna and Strathmerton is to be proclaimed a Public Purposes (Flora and Fauna) Reserve.

The area is most attractive, featuring water fowl and red gum forest.

Congratulations to Mal O'Malley and Wally Stebbings and their Committee for their continued efforts to have this area proclaimed.

(Mr. Stebbings is a regular subscriber to our Geelong Naturalist, and takes a keen interest in our Club activities.)

* * * * *

A FLINDERS RANGES TRIP

PETER FAGG

The Flinders Ranges will delight any person. But a naturalist's delight will go deeper than that of the pure sightseer. The Flinders will captivate the geologist, the ornithologist, the botanist, and the photographer.

With the reds and ochres of the raw rock faces; the sinuous "gum-creeks" winding over plain and through gorge; the stumpy-tailed lizard casually crossing the dusty track, the Flinders are really something to see, and to get the feel of.

The Ranges, first recorded by Matthew Flinders in 1802, begin about 120 miles north of Adelaide and head roughly NNE for a further 300 miles. The series of long ranges and hills are basically quartzite (or hardened sandstone) of Proterozoic origin. Strong erosion, after a Tertiary uplift is responsible for the present inviting ruggedness.

A friend and I spent two rewarding weeks touring to, around, and home from, The Flinders, in September 1968. Several of the highlights of our trip may entice others into these parts.

ALLIGATOR GORGE

The Alligator Gorge (see sketch plan) and its catchment area, form a National Park. Near the gorge, large (native) sugar gums (Eucalyptus cladocalyx) blend with the textured dark green of the cypress pine (Callitrus columellaris glauca). The facetted, sheer-walled gorge, like all of the other Flinders gorges, is lined with ancient river red gums (E. camaldulensis). On their upstream side, many of these gums have scarred butts - attesting to damage by debris hurled at them irregularly by a roaring torrent.

The falls which we found after following the left hand fork upstream pas "The Terraces" are worth the short walk, as are the "jaws of the alligat downstream from the point of descent.

QUORN DISTRICT

Quorn, with its wide gravel streets and shady verandahed empty shops, still exudes a "pioneer" atmosphere of a period long past. From Quorn, the route to take is via the Warren and Buckaringa Gorges, and Proby's Grave, to meet the main Quorn-Hawker road at deserted Gordon. After a good rainy season, the flat country crossed after Buckaringa is blanketed with golden everlastings and russet legumes. These, against purple hills and a flawless sky, complete a picture to rival the gorge-type scenery.

A FLINDERS RANGES TRIP (Cont'd.)

BUNYEROO AND BRACHINA

Bunyeroo Valley presents a vista of unique beauty. Its slopes, clothed in the blue-purple of salvation jane (Echium lycopsis plantagineum) and complimented by the dull reds of the rosy dock (Rumex vesicarius rosea), are balanced by the distant Wilpena Pound peaks. Out of the shaley bed of the Bunyeroo Gorge, the road follows through to Brachina Gorge and the Aroona Valley. (Incidentally, all "ch's" in The Flinders seem to be pronounced as in "church".) There are, on the 4-mile trip from the turn-off to the old Aroona homestead, 39 countable creek crossings!

The fiery Brachina Gorge is spectacular and should not be missed.

LEIGH CREEK DISTRICT

Just west of Beltana, on the main road to Leigh Creek, there is a substantial cairn, whose plaque praises the work of The Smith of Dunesk Mission. The memorial was erected in May, 1961, by members of the Geelong College Exploration Society.

Multi-hued steep-sided hills cradle the impressive Aroona reservoir, south-west of Copley. Constructed in 1955 by The Electricity Trust of South Australia to supply water to Leigh Creek, the reservoir relys upon summer thunderstorms to fill its 1,650 million gallon capacity.

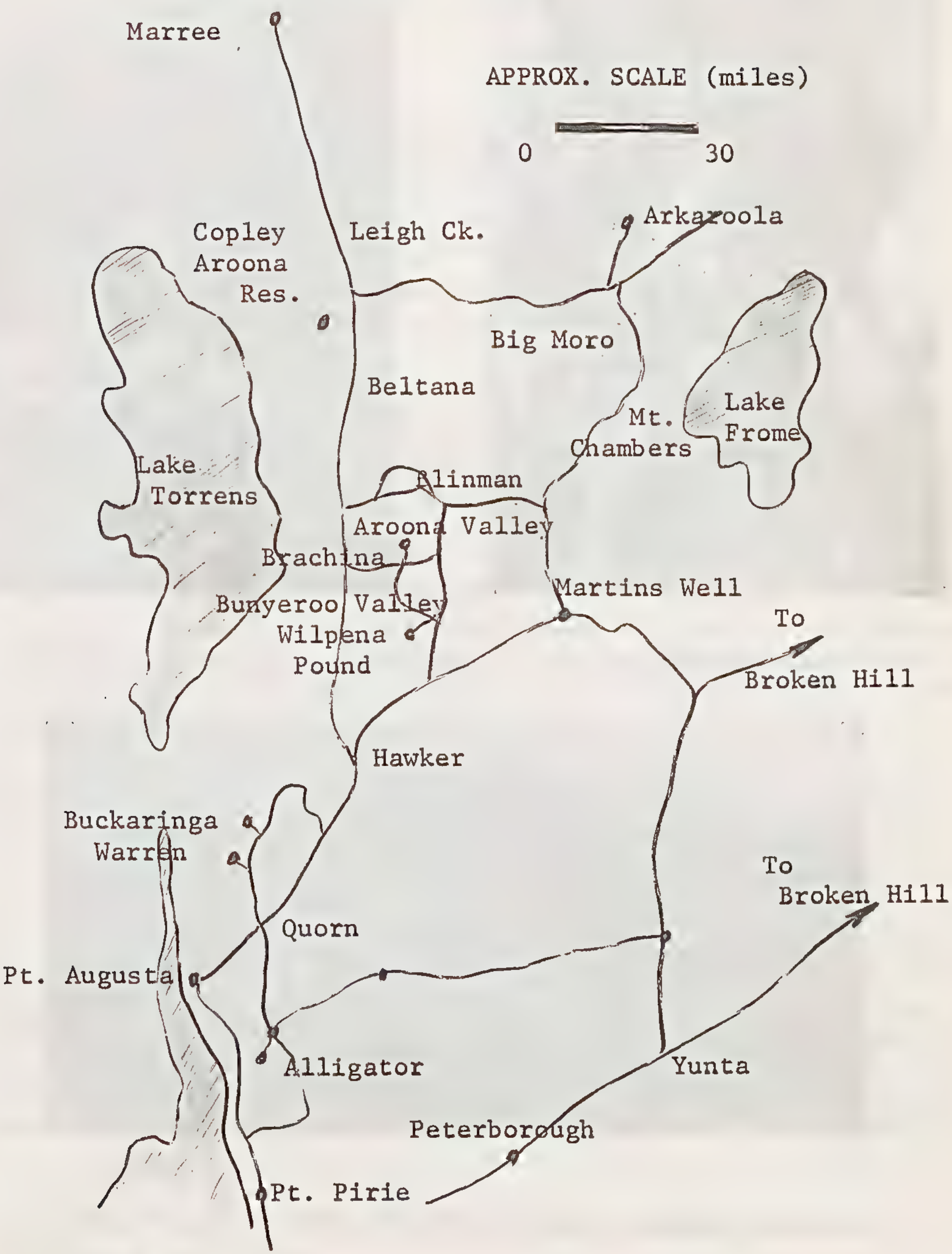
Leigh Creek, the town set up in 1948 by The Electricity Trust to open-cut mine black coal, is a pleasing tree-lined "oasis". The coal is railed to Port Augusta to be burned for electricity generation. With a population of 1000, Leigh Creek is the largest town between Port Augusta and Alice Springs.

BIG MORO

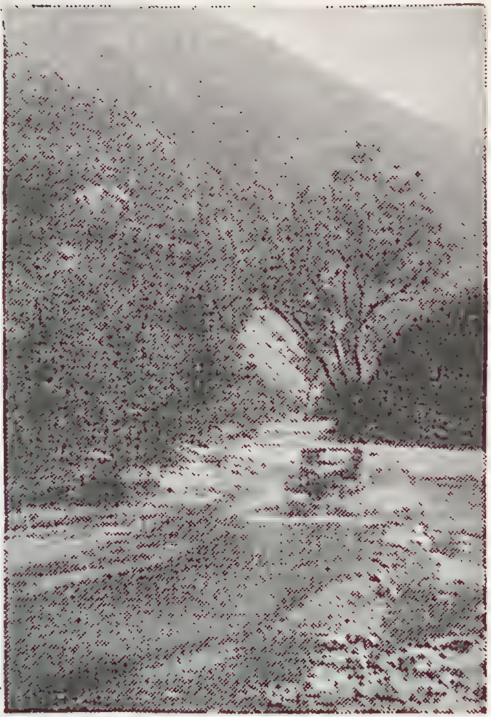
Big Moro Gorge, although inaccessible to low-slung or underpowered vehicles, is a fascinating area for the more adventurous. The permanent water holes in its calcite-veined rock bed, plus its unusual share of plant and bird life, made this remote spot a favorite with us. Blunt-budded red gum (E.camaldulensis var. obtusa), curly mallee (E. gillii), emu bushes (Eremophila spp.), and hop bushes (Dodonuea spp.), are some of the plants there. Zebra finches, spiny-cheeked honeyeaters, herons, and the ubiquitous galahs, were common. A few miles south of the turn-off to Big Moro, the scarlet, eye-catching Sturt's Desert Pea, was keenly photographed.

Some Spots In

THE FLINDERS RANGES



Sturt Desert Pea



Brachina Gorge in our '39 Chev.

Flinders Ranges - north from St. Mary's Peak Wilpena

Photos. by Peter Fagg.

A FLINDERS RANGES TRIP (Cont'd.)

Rugged, remote, Arkaroola (see map) is the gemmologist's happy hunting ground. Here, a modern "Dude Ranch" was opened in 1968 to cater for the expected hordes of "rock-hounds"!

MT. CHAMBERS

Mt. Chambers Gorge, located near the S.W. corner of Lake Frome is a favorite with many people. On a pre-breakfast hike we spotted one euro, a member of the wallaby family, heading into the steep, barren hills which flank the gorge; and a black-fronted dotterel, walking on the slime-covered waterholes, was identified.

This gorge is huge in length and depth - being easily 500 feet deep, and about two miles long. Four-wheel drive vehicles can pass through it.

WILPENA POUND

We saved this, the most talked about part of the Flinders, till last. Physiographically, the Pound is a remnant of quartzite strata, shaped like the bowl of a giant shallow spoon. At the NW end of the Pound, deep Edeowie Gorge is worth the walk. It is definitely not the drive-through kind, but its small falls, and finely dissected towering sides impressed us most of all The Flinders' gorges - notwithstanding that litterbugs had tainted the natural beauty of the creek bed.

The panorama from St. Mary's Peak (3,882') tok our breath. The patterned blue ranges to the north, Lake Torrens to the west, the Pound itself to the south, and the rolling sheep country to the east - all views were magnificent.

TO BROKEN HILL

Homeward bound, we followed an adventurous RACV route to Broken Hill through Martins Well homestead, along part of the London-Sydney rally route.

The bird life in this scrubby, arid, vegetation was a treat. Being rank amateurs, one of us would describe the bird through binoculars, while the other would feverishly flip through "What Bird is That?" for its name.

Some birds identified were: Masked Wood-swallow, Crimson Chat, Crested Pigeon, Ground Thrush, Cinnamon Quail-thrush, Red-backed Kingfisher, and the Fairy Martin.

I certainly hope to spend another absorbing fortnight in The Flinders Ranges.

"WHILE WE SLEEP"

L.W. ELMS

When the hour gets late, it is customary for us human beings to put out the fire, switch out the light, and get off to bed. But what happens at the same hour in the realm of Natural History? Do all Nature's Creatures go off to bed too? Far from it!

As darkness settles in the lonesome koala realises he has eaten all the choicest gum tips in his present tree, so he climbs down, ambles across to another tree, and climbs up to a new perching spot which he might occupy for some six or seven days. At certain seasons he might even select such a new tree because it already has another attractive koala in it!

The Boobook Owl leaves his nest at dusk and goes searching for a stray mouse or some such creature for his supper. The bats and gliding possums also emerge and search for food, as also do the wombats who have been asleep in their burrows all day.

The wildlife down at the swamp becomes noisy with the frogs and toads competing with the nearby cicadas in a battle of sound. The yabbies, fearing a flooding of their tunnels, emerge to build higher the clay bottleneck structures, and thus prevent any flood water entering their homes. The Termites, which are blind and avoid the light, consider the evening an appropriate time to start their eating of the timber near which they live. The spiders come out and build their beautifully shaped webs between the trees, and in the early morning light we can see them sparkling with the dew on them.

The shrubs and trees are not idle in the hours of darkness either, and they give off large quantities of oxygen and water vapour from the stomata pores on the underside of the leaves. In the gum and wattle trees, the rising sap and gum emerge from cracks which may have occurred in the bark, and in the morning we find droplets of gum hanging down along the tree trunk, or dropped on to the ground beneath the tree. Several flowers close up as the evening darkness arrives to protect their pollen from moisture, but they open again at sunrise next morning. In the case of the Austral Blue Bell, it is often found that a small black wasp has entered the flower before it closes up, and he is thus assured of a warmer rest throughout the cold night. Mushrooms and other fungi seem to grow best at night, and can often be found in the early morning in places where they were not visible on the previous evening.

"WHILE WE SLEEP" (Cont'd.)

In the realm of birdlife, there are many tasks performed at night. The first male muttonbirds to arrive at the rookery have to clean out last years burrows to provide suitable nests for the new season. Later, when the hen birds are on the nest, they come again every night with a crop full of marine food, and feed the hen bird on her burrow. The Fairy Penguins are renowned for their habit of returning each evening after a day in the ocean, and they then attend to their domestic affairs on their nesting ground at night. Most other birds, during the breeding season, have to sit on the nest day and night to hatch out their eggs, and the Mallee Hen has to check the temperature of the mound and adjust the compost to maintain a constant heat. Many birds therefore seem to be busy all day and all night too.

Along the seashore, whilst all this is going on in the bushlands, the tides keep moving in and out, exposing shells and seaweeds, and stranding small marine animals which thus form the next days meals for the hundreds of seabirds and crabs. It has also been proved that shoals of fish move from one feeding ground to another during the hours of darkness.

With the cooler night air conditions, mists and vapours will settle down into the valleys, and with the rising temperature of the air after sunrise next day, they will rise again up to the hilltops. Thus we see that the clouds are on the move during the night hours also.

Even in the realm of Geology there is action going on at night. The sun shines strongly on a mass of rock during the daytime, and it expands. But at night when it cools down again, it will contract, frequently causing small cracks into the rock mass. Then comes a frosty night after rain, and the freezing of the water in these crevices causes such an expansion of the water as it turns into ice, that the rock becomes split apart, and shales and sandstones are disintegrated in this manner.

And so we see that while we are asleep in bed throughout the night, many of the objects of Natural History are roused into action. The birds and animals prepare themselves for the coming day, and when we get up, they do the reverse and go - "Off - to - Bed".

* * * * *

A QUEENSLAND WONDERLAND

LILIAN MEMMOTT

Binna Burra Lodge, one needs a month, six months, a year to explore this mountain paradise. We were there for just one night. Happy to find a camping site as we had no idea where we were going to sleep. Darkness fell as we ate our meal by the kerosene lamp light.

It was a shadowy world outside. An owl sat on a signpost watching and listening as we talked to a fellow camper,and we could hear the hoots of other owls.

In the early morning we stood there on top of the world to look down on the clouds below with mountain peaks peeping through. We saw the most gorgeous sunrise and heard the call of the Currawong and the whiplike sound of the Whip-bird, then the dear old Kookaburra. How pleased we were to hear his laughter. We had heard so many **tales about** the Queensland Jackie, **that none** were up here, there were some but they made no sound, some did but it was a weak imitation and so on. It gladened our hearts to know he was there with his cheeky laughing call. We did notice that they were slightly different in colour to the Victorian ones. We realised too how many new calls there were and what a lot we had to learn and what a boon the Geelong Field Naturalists had been.

We packed camp and moved off back to Beechmont and to the Numinbah Valley. On this track we could look down into a basin of trees, from deep valley to mountain height, just trees. To us it was fantastic. A little further on we had to stop to gaze in wonder into a valley of a hundred hills, each one covered in bush.

The Numinbah Valley was another beautiful sight. Green and lush with a series of bushland ridges with buttress ridges extending to the valley below.

We drove on to the Natural Arch National Park. On the way we saw lots of Lantanas in bloom. The Park was a Naturalist's paradise. It seemed to feature every type of tropical growth typical to this part of Queensland and once again we realised what a lot we had to learn. There was the Fibrewood or Stinging Tree almost at the entrance, a greeting one would not forget if one brushed against it. The pathways led through a bushlike setting. We stopped to admire the Cathedral Tree, Watkins Fig or to give it its scientific name Figus watkinsiana. It was so fat that it had burst open to reveal"its innards". No need for transplants here as it seemed to

A QUEENSLAND WONDERLAND (Cont'd.)

have grown a spare lot of roots inside.

We clambered on to boulders in midstream to admire the huge formation of rock that formed the Arch. A waterfall cascaded down through a hole in the roof into a deep pool. Steps led under the Arch, which is a glow-worm cave at night. A bridge goes over the top and one gets a different picture from above, pool and rocks with a big fallen tree trunk lying across. We would have liked to linger longer but time would not allow.

Off again through more beautiful mountainous country. One could look from right to left and see mountains towering beyond mountains, all covered with trees.

This time we made for Springbrook and the Gwongorella (Dancing Waters) National Park. Here we saw the Purlingbrook Falls cascading down 410 feet and as we explored into some bush we came on a Bower Bird's playground. It was beautiful, like a basket with a lovely curved handle. There was no sign of the bird just brightly coloured pieces of blue, silver and pink that they like to collect.

Our weekend was complete when the Ranger gave us permission to camp right there in the Park of Dancing Waters.

* * * * *

EARLESS DRAGON LIZARD

In September 1968, Debbie Gellately a schoolgirl at Newcomb, obtained a specimen of the Earless Dragon Lizard Tympanocryptis lineata pinguicolla; although it was found near Newcomb, its precise source of origin was not known.

Another specimen of this lizard has been found, this time by Wayne Gladman of North Geelong, in July 1969; this second specimen was found under some stones near the Ballarat Railway-line crossing at Thompson Road in North Geelong.

Several years ago, Mr. Geoff Carr noted several dragon lizards under stones in Hamlyn Heights; these reptiles could possibly have been this same species.

NATURE'S INTANGIBLE WONDERS

L.W. ELMS

At both the indoor meetings and the outdoor excursions of our Field Naturalists Club, one of the most interesting features is the varied display of specimens drawn from the wide range of Natural History, as presented on the Specimen Table.

There are however many more marvels which are familiar to us all, but which are intangible, and cannot therefore be placed on the specimen table for examination.

For instance, on an excursion trip, how often has it appeared that the cars in front of us are running through sheets of water across the road. Yet when we reach that spot it is quite dry, and we realize we have seen a MIRAGE - a freak atmospheric condition resulting from heat and humidity. A somewhat similar occurrence takes place when we look at a RAINBOW. The colours are so bright that they seem to be painted on to the trees and to the hills behind them, but they are of course only the sun's rays broken up into the seven basic colours by refraction in the moisture laden atmosphere, and can only be seen when we have the sun directly behind us.

If we are uncertain of our direction of travel, we frequently take out a compass, and the needle immediately points to the north magnetic pole. Although we cannot see it, feel it, or otherwise detect it, the whole world is surrounded with this MAGNETIC FORCE. Some of Nature's creatures can however pick up the effect of this force without resorting to the aid of the compass as we human beings have to do. For instance in Northern Australia the Magnetic Ants build their huge mounds of earth pointing exactly North and South. The bees do likewise when building their honeycomb in the hive, and possibly even the mutton-birds and the homing pigeons have means of picking up these magnetic influences whilst making their remarkable long distance flights.

When on an excursion picnic we can often smell the scent of the flowers in blossom on one side of the road, and perhaps the scent of some other types of wildflowers on the opposite side. Just what is this SMELL? It is, of course, a quantity of very minute molecules carried on a stream of air from the particular source of the smell to the sensitive membranes in our nostrils. Without this miracle of Nature, many of our birds and animals would not

NATURE'S INTANGIBLE WONDERS (Cont'd.)

be able to find the carrion food on which they live.

These are but a few of the intangible marvels which surround us - all real enough in themselves, but yet intangible, such as echoes from a cave, the moonlight at night, eclipses of the sun and moon, the "Aurora Australis", shooting stars, and even the lovely patterns of stratus and cumulus cloud masses when colored by the sunset.

Field Naturalists will therefore be well rewarded if they lift their gaze above the commonplace levels of birds and plant life etc. which we normally examine, and search for and study the wealth of interest that can be found associated with - "NATURES INTANGIBLE WONDERS".

* * * * *

"TROUBLES OF A BIRD-WATCHER"

OONAH MCHAFFIE

What bird is that?
Give me the glasses do,
Here comes the cat,
The bird will fly too,
And that will be that.

The colour that I see
Would it be yellow
Or buff maybe?
The little fellow
Is very hard to see.

It could be grey or brown,
The colour's indeterminate;
Never to have it known
'T will be my fate;
What is that upon its crown?

Is it green or blue?
I feel quite sad,
I have no clue,
The light is bad;
And away it flew.

I looked my fill,
And away I came,
Empty of the will,
To find some fame,
My notes are nil.

And hopeless the book
Without some detail;
However long I look,
My task must fail
Whatever time I took.

* * * * *

AT RANDOM

KILLER OCTOPUS - by Jack Wheeler.

During mid-April, a sunday afternoon beach walk at Point Henry by Mr. & Mrs. D. Rawle accompanied by daughter Sandra, revealed a small octopus washed up on the beach dead. It was placed into a plastic container and delivered to the Geelong Field Naturalists Club for identification. The octopus had an overall span of eight inches and its dark blue rings on its body and tentacles were features which identified it as the deadly 'blue-ringed' species. To make sure it was packed and sent off to the National Museum for positive identification. In reply, the museum confirmed that it was a 'blue-ringed' octopus of adult size and its scientific name 'Talalochlaena maculosa' (Hoyle 1883). Several octopuses answering this description have been found in the Geelong district of recent months and they occur both in Port Phillip Bay and along the ocean reefs. This species is known for South Australia, Victoria, New South Wales and Queensland, and the museum says that it appears to be much more common in the southern waters of its range. Outside Australia it is known to occur in the Indian Ocean, mainly Ceylon and also is known in Japanese waters. This creature has no sting as many suppose, but in the centre of the mouth is a tiny parrot-like jaw which inflicts a bite from which poison glands transmit a deadly poison into a victims bloodstream. The poison glands are modified salivary glands opening by a duct into the mouth. The museum says that the poison is virulent and cases of human fatalities have been known.

The other known species Hapalochlaena lunulatus occurs in New Ireland and Torres Strait.

(A photo of this species was featured on the cover of our January Naturalist, 1969)

AT RANDOM (Cont'd.)

CATTLE EGRETS AGAIN - by Jack Wheeler

At Werribee there is a large colony of Cattle Egrets, 37 in all and bird observers are watching keenly to see if this colony will breed in the district this coming season. To my knowledge this is the largest flock ever recorded for this Geelong area, if not Victoria. Previous best in this district was 26 at Whittington in 1965. This present flock appear to be constantly associating with grazing cattle of which there are plenty at Werribee. Other reports of cattle egrets would be very welcome, particularly when coming into their beautiful and attractive mustard tan plumage for breeding.

MORE SWIFT NOTES - Rev. A. Eames

22/1/69- Blackwood. Sultry, 90°, 150 Spine-tailed swifts, circling very low 11.30 - 12.30.

The same flock at Shaw's Lake, Blackwood. Small lake about 100' long, surrounded by tall eucalypts. Many swifts flew low over the water, some with audible splash (heard by me 50' - 70' away).

A boy fishing nearby, said that earlier one of the swifts had hit the water too hard, and had just managed to flap across the water for about 50' to the shore, where it lay exhausted. When he went to pick it up, the bird flew away.

10/4/69 - Hamlyn Heights, Geelong. 11.00a.m. - 20 birds; 12.45p.m. - 10 birds. Very windy, N.W. wind, sultry, 92° max.; sunny until overcast at 4.00p.m. Cool change 4.45p.m., but very little rain.

The swifts (Fork-tailed) were flying N.W., fairly directly.

10/4/69 - Western Beach, Geelong. Between 3.30 and 4.42p.m., a total of at least 860 Fork-tailed were seen, most flying over Corio Bay. There were probably several thousand birds in all, by my observations only began at 3.30p.m. No more swifts after cool change at 4.45p.m.

* * * * *

"VENOMOUS AUSTRALIAN ANIMALS DANGEROUS TO MAN"

A BOOK BY J. ROS GARNET

There is in Australia a wide variety of animal species which are capable of, or potentially capable of inflicting a bite or sting which may endanger the health or life of a human being.

Because of the wide diversity of climate and habitat involved, species in doubt must include those found in tropical waters, the inland, and southern forests. With our relatively small population, the conflict between many of the species and human beings is very limited, so that there is with many species no confirmed cases of envenomation. Yet the potential danger is always present.

A book published recently by the Commonwealth Serum Laboratories and written by Melbourne Naturalist Mr. J. Ros Garnet, titled "Venomous Australian Animals Dangerous to Man" covers all of the species known or believed to be dangerous to man, and some species or groups are discussed in detail.

The text of the book is broken into sections covering three main groups, the first being marine creatures, the second Arthropods, and the third snakes.

Animals considered in the first section are sea snakes, fish which are poisonous or venomous, the stonefish, sea wasps, cone shellfish and the octopuses.

In the second section, Mr. Garnet has discussed the centipedes, scorpions, ticks and mites, and the spiders.

The last section deals with the snakes, and there are detailed descriptions of identification and distribution of all dangerous or potentially dangerous species; the treatment of snake bite is also discussed in detail.

A chart showing the classification of the "Phylum Reptilia" is appended, and throughout the book are excellent black and white photographs and drawings.

The use of scientific names throughout may at first confuse, but if the reader overcomes this, he will find a thoroughly readable and excellently documented book, one for every naturalists bookshelves.

(Review by Trevor Pescott)

JUNIOR PAGE

Naturalists in Geelong are fortunate in many regards, for we have close to our city a wide variety of habitats - types of country - each one with its own special flora and fauna. We have the ocean beaches, the bays, swamps, lakes, rivers, plains, heath, woodland and forest - and we can sample any by travelling less than 40 miles from home.

Which is your own favourite type of country? Perhaps it is the beach - at least in summer - for each rock pool hides some marine creature of strange shape and habits. Have you noticed the strange creatures clinging to the rocks like large red buttons? When the tide covers them, they open rather like a flower - do you know what these are called? Or it may be a swamp, where tadpoles, "toe-biters", water-fleas and other creatures abound - where do they go when the swamp dries out? Can you find out by your observations or by reading nature books?

You may like the You Yangs - dry sclerophyl forest is the way its flora is described - where a wide variety of birds are to be found. The You Yangs were never, at any time in history a volcano - as Mt. Anakie was - but do you know what the rocks that form the You Yangs are called?

The Otway Ranges are another fascinating place, where birds like the Rufous fantail and Satin Bower-bird are found, and where Bandicoots, Potoroos and Tiger-cats still survive. What, you may ask, is a Potaroo? Well, what is it - do you know?

On the next page are photographs of four subjects found around Geelong - do you know what they are?

Write to the Editor, "Geelong Naturalist", c/o 4 Victoria Terrace, Belmont 3216, if you know the answers to the questions above.

In the next issue of "Geelong Naturalist", we will print your answers, and any more information that may interest you.

* * * * * *

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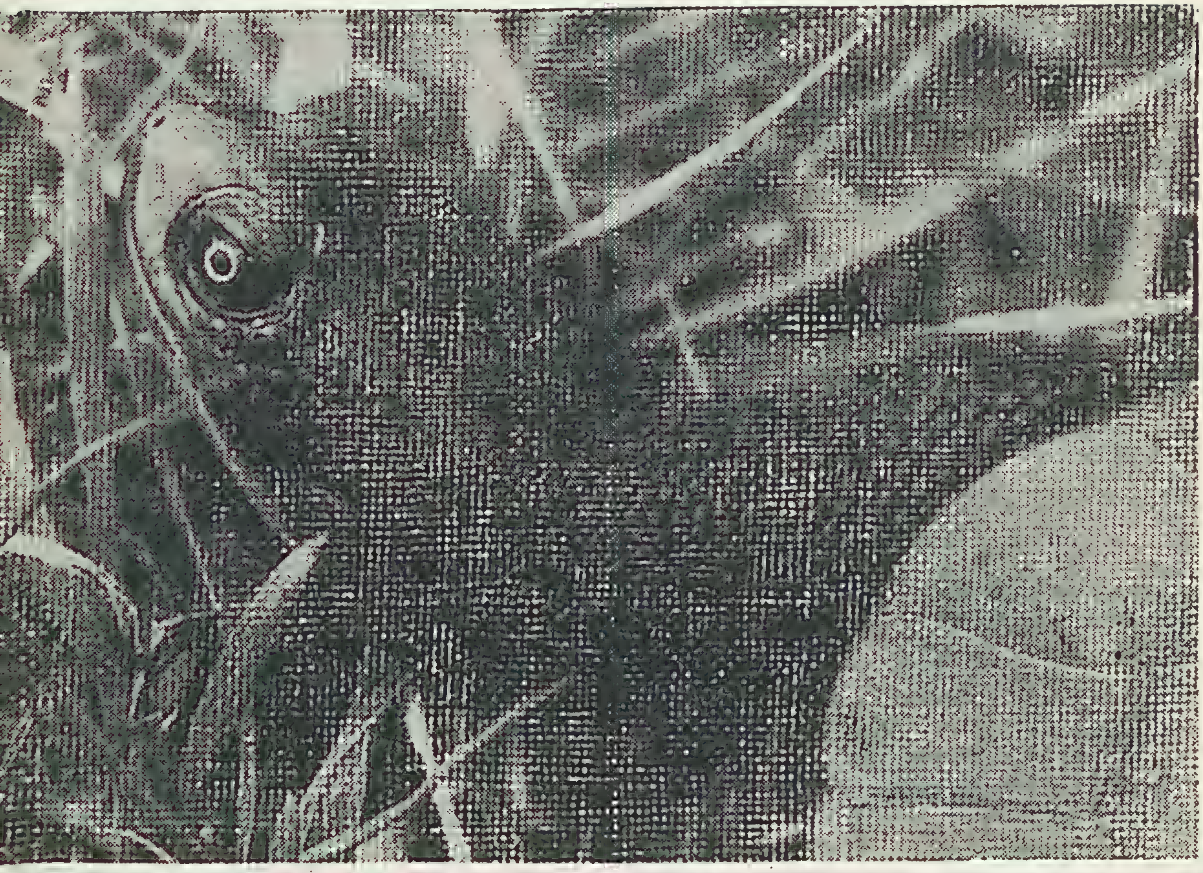

LONG NECKED TORTOISE

Hon. Editor: Trevor Pescott

Registered at G.P.O. Melbourne for transmission by post as a periodical

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

MEMBERSHIP

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COVER PHOTOGRAPH:

Long Necked Tortoise from Portland

by Trevor Pescott.

GEELONG NATURALIST

Vol.6. No.3.

EDITORIAL

November, 1969.

A growing number of naturalists are showing concern at the lack of protection for our native reptiles, protection we accept as elementary when applied to other forms of plant and animal life.

Tortoises and the larger lizard species are the most maltreated forms, and a television news item last month showing the capture, mass packing and transportation of large numbers of tortoises to pet shops highlighted the cruelty in the methods used.

The problem lies mainly in public apathy towards all reptile species, the same apethy, fear and superstition which has brought about the expression that "the only good snake is a dead one"!

Whilst this disinterest continues, the authorities concerned with fauna protection can not be expected to instegate any action which would bring about legal protection; protection is only as good as the policing of it ensures, and this in turn is only as good as available finance will allow it.

So we have two problems to overcome, if we decide that the reptile fauna is worth protecting as we protect other fauna forms - first, we must prove that the reptiles are worth protecting, and secondly we have to convince authorities that protection is necessary.

To overcome the apethy of both the public and the authorities is no small task, and it would seem that our first objective should be to have outlawed the present methods of capture, transportation and sale of the most vulnerable and mistreated reptile species.

TREVOR PESCOTT,

Hon. Editor.

WADERS OF THE GEELONG DISTRICT

Fred T.H. Smith, Kew

Although a non car owning resident of Melbourne, my interest in the waders - of the order Charadriiformes - has led me many times to the Geelong District in search of them. Most of my trips from Melbourne have been made with vehicle-owning, bird-watching friends. Sometimes Bird Observer Club excursions that I have attended, have been to that area; and a few times I have made my way by train. The Geelong District, besides being a very good bird area generally, is eminently suited to waders because of its lakes, marshes, streams, long shore-lines and plains. At present there seems to be no well defined boundary to the Geelong District, at least as far as natural history observations are concerned. The waders listed here have all been recorded from places as far apart as Werribee on the north side of Corio Bay, Mud Islands to the east, Lake Corangamite to the west and the southern coast to as far south-west as Apollo Bay. The list covers forty-six species of waders, some of which occur in the district regularly in large numbers; some regularly in small numbers; some are distinct rarities and three or four are vagrants. All the birds mentioned, but for the Oriental Dotterel and the Painted Snipe, have been seen by myself in the area: appended notes are largely from personal observations except where otherwise acknowledged. The main purpose of this article is to present a complete list of the Geelong District waders to date, with accompanying remarks and observations succinct but, it is hoped, not to the point of complete uselessness. Dates have been supplied only for some rarities and vagrants and where it is thought they may be of particular interest.

The field - or marsh - study of waders is recommended as a fascinating and rewarding branch of general bird observation. Part of the fascination comes from the realisation that most of the wader species recorded in the Geelong District are far-flying birds that breed only in the Northern Hemisphere, some as distant as north-east Siberia and Alaska. The rewards mainly come from learning to identify waders with confidence, and the occasional locating of a rarity.

Thirty two of these waders are true migrants: all migrate north and south but for the Double-banded Dotterel which comes south-easterly from the New Zealand region, for our autumn and winter.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

The north-south migrants begin to arrive towards the end of August each year, and have mostly departed by the end of the following April. The best months to see them in maximum numbers are from October to March inclusive. Some of the non-migrants seem to be partly or largely nomadic, but most can be found locally throughout the year.

Some of the best places to see waders in the Geelong District are as follow: Werribee Sewage Farm ponds and marshes and the adjacent Longreef, also known as "the spit"; Avalon and Geelong Saltworks; Stingaree Bay; southern part of Lake Connewarre, from the Hospital Lake eastward to the Barwon River mouth; Reedy Lake; Swan Lake shores; Mud Islands; the salt lake and Cox Lagoon near Point Lonsdale; Lake Murthaghurt; Lake Corangamite and some nearby lakes, such as the southern shore of Lake Colac; parts of Lakes Colongulac, Bookar, Milangil, Coradgill, Terangpom and Martin's and Shallow Lakes. The southern ocean shoreline from Point Lonsdale to Apollo Bay does not have many waders, but one species - the Hooded Dotterel - is found there almost exclusively. The fields and plains about Geelong hold both the Spur-winged and Banded Plovers.

The list order and nomenclature follow that of "A Handlist of the Birds of Victoria"; by W. Roy Wheeler: but I have substituted Numenius for Mesoscolopax when referring to the Little Whimbrel.

TURNSTONE Arenaria interpres.
Not often noted away from Mud Islands, where over one hundred may be seen at times; mainly during spring and summer.

PIED OYSTERCATCHER Haematopus ostralegus.
Not uncommon about the shores of Corio Bay and at Mud Islands. This species breeds sparingly at both places.

SOOTY OYSTERCATCHER Haematopus unicolor.
An uncommon species in the Geelong District. Mostly observed singly; however, up to half a dozen may be seen at Mud Islands, and I once saw, on July 28, 1968, a similar number at the Black Rocks near Breamlea.

RED-KNEED DOTTEREL Erythrogonys cinctus.
This species regularly visits the Werribee Sewage Farm marshes, where it occasionally nests. Most often noted in spring and summer: up to eighty have been counted there in a day.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

AUSTRALIAN SPUR-WINGED PLOVER Lobibyx novae-hollandiae.
A common and therefore well known bird about the Geelong District, where it breeds widely about the area.

BANDED PLOVER Zonifer Aricolor.
Not quite so well known as the Spur-winged Plover: nevertheless this species is not rare. Perhaps one reason is that it is more difficult to see than the larger bird, particularly when its back is turned. The bird nests locally.

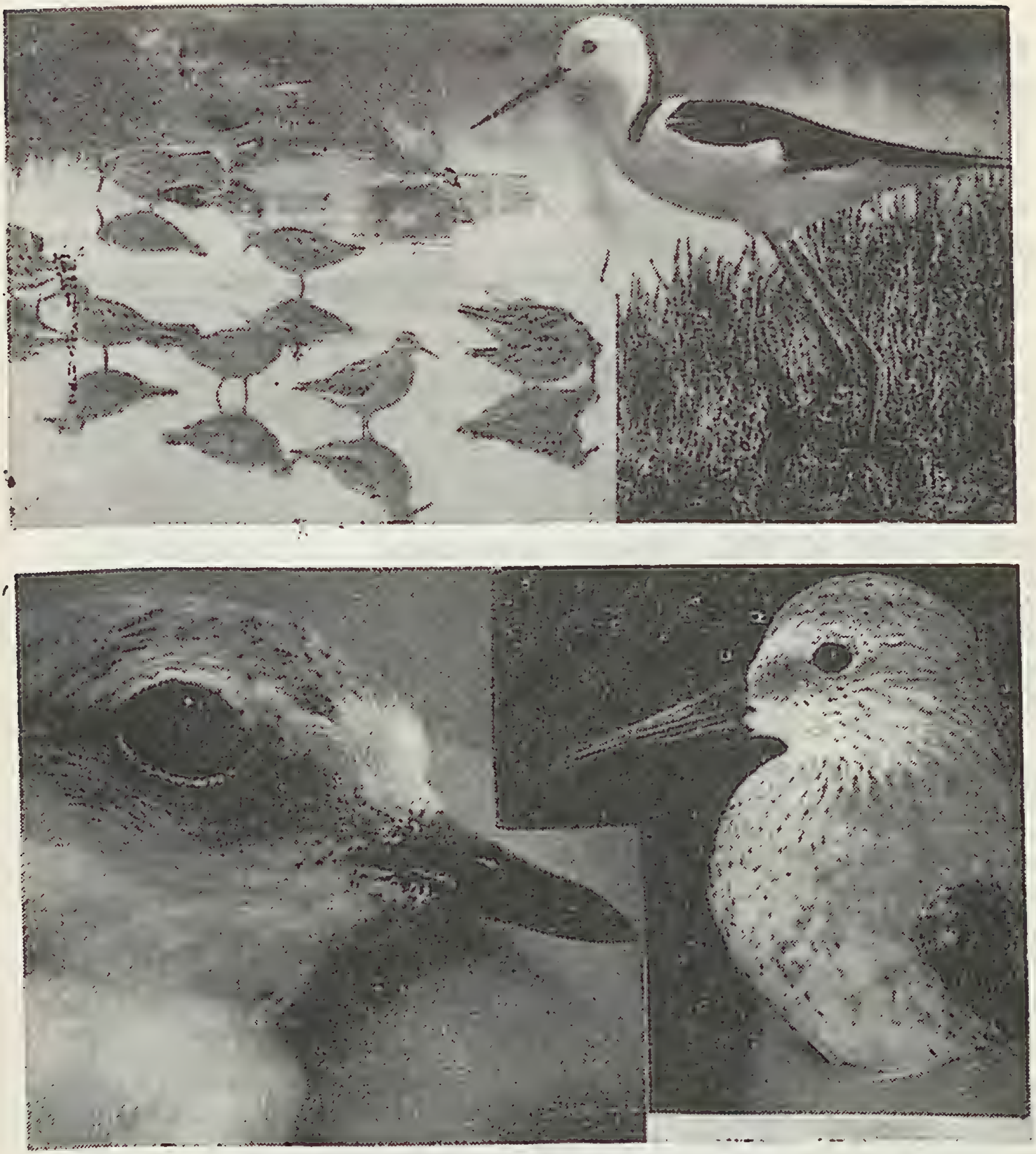
GREY PLOVER Pluvialis squatarola.
A regular spring and summer migrant to Mud Islands; where up to 300 may be seen some years. Also noted at Longreef, Werribee Sewage Farm, and Stingaree Bay; singly and in groups to six or a few more.

EASTERN GOLDEN PLOVER Pluvialis dominicus.
Another species that is most prevalent at Mud Islands. Over 100 are to be seen there at times, in spring and summer, and in smaller flocks at Point Kirk and Longreef, Werribee Sewage Farm; and Stingaree Bay.

HOODED DOTTEREL Charadrius cucullatus.
Found on the southern ocean beaches from Point Lonsdale to Apollo Bay in pairs, in spring and summer, when it breeds; and small groups during the autumn and winter. The species has almost disappeared from some beaches where years ago it was resident in small numbers, little doubt due to increasing human disturbance almost the whole year through. Occasionally it is reported from Mud Islands but I have not seen it there.

MONGOLIAN SAND-DOTTEREL Charadrius mongolus.
At times in the late spring and summer months up to 100 may be found on Mud Islands. Apart from there I have seen a few at Longreef, Werribee Sewage Farm; Stingaree Bay, and the Geelong Saltworks.

DOUBLE-BANDED DOTTEREL Charadrius bicinctus.
This species usually begins arriving, from the New Zealand region, about the end of summer. However, each year exceptionally early birds can be seen at Mud Islands by the end of January. From March to early September, Double-banded Dotterels are fairly widespread in the district. Some of the lakes near, and including, Lake Corangamite hold many of the birds; Lake Murdeduke being



Top - Sharp-tailed Sandpipers and White-headed Stilt.

Lower - Red-capped Dotterel and Knot.

Photos. by Trevor Pescott.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

particularly well attended.

LARGE SAND-DOTTEREL Charadrius leschenaultii.
Occurs on Mud Islands during spring and summer in small numbers. I have never seen more than about ten on any one visit. Other than there I have seen an odd one at Lake Borrie - when dry - and Longreef, Werribee Sewage Farm.

ORIENTAL DOTTEREL Charadrius veredus.
The only records of which I am aware are those in "A Handlist of the Birds of Victoria" Wheeler, as follow: "Corio Bay 1902". "and Queenscliff 1960".

RED-CAPPED DOTTEREL Charadrius alexandrinus.
Plentiful and breeding about bay and lake shores, Mud Islands, Werribee Sewage Farm, Avalon and Geelong Saltworks. Lake Murdeduke is well frequented by this species, as is also Lake Corangamite and some nearby lakes.

BLACK-FRONTED DOTTEREL Charadrius melanops.
Not quite as plentiful as might at first be thought. A few are found along the banks of the Barwon; particularly near Geelong City and at lesser streams. Others may be seen at Lascelles Dam, on Wooloomanata, and the larger earthen banked water storage tanks about the district as well as some muddy edged freshwater marshes. It breeds where found.

WHITE-HEADED STILT Himantopus leucocephalus.
This bird may be found all about the district at fresh and salt water marshes, where it breeds. Werribee Sewage Farm; Reedy Lake; southern shore of Lake Connewarre; Avalon and Geelong Saltworks are all good places to see the species.

BANDED STILT Cladorhynchus leucocephalus.
Sometimes at the Geelong Saltworks in hundreds: normally a few are to be found there each year. I have seen small groups, to about 100 birds; also at the Werribee Sewage Farm, Avalon Saltworks and Lake Murdeduke. The species is usually noted during the autumn and winter months, but sometimes in early spring and late summer. It is not known to breed in Victoria.

RED-NECKED AVOCET Recurvirostra novae-hollandiae.
Occasionally seen in hundreds at Werribee Sewage Farm and Avalon and Geelong Saltworks where it sometimes breeds in small numbers.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

EASTERN CURLEW Numenius madagascariensis.
Mud Islands may hold well over 1000 of these birds during the spring and summer of some years. They feed a great deal in the vicinity of Swan Bay. Other places where they can be seen in lesser numbers are: Longreef, Werribee Sewage Farm, Geelong Saltworks and Stingaree Bay, and the southern side of Lake Connewarre to near the mouth of the Barwon River.

WHIMBREL Numenius phaeopus.
A rather rare bird in southern Victoria - it does not occur inland -; it is certainly scarce in the Geelong District where one can hope to see an odd one or two at Mud Islands during spring and summer. I have seen no more than four there at any one visit. At Longreef, Werribee Sewage Farm, I can remember noting at least two over fifteen years. One was there early in 1969. This race N.p.variegatus shows little white on the rump at times and if not seen well could be mistaken for the dark-rumped American subspecies N.p.hudsonicus.

LITTLE WHIMBREL Numenius minutus.
A decided rarity anywhere in Victoria: I have seen three at different times at Werribee Sewage Farm, in recent years and one at Lake Murdeduke; and have heard of two others at the latter place. It is a spring and summer visitor.

BLACK-TAILED GODWIT Limosa limosa.
Another rare spring and summer migrant; this bird is most often seen singly, or in twos and threes. I once saw eleven together at the Werribee Sewage Farm. The species has been recorded from Mud Islands, and Avalon and Geelong Saltworks.

BAR-TAILED GODWIT Limosa lapponica.
A common species at Mud Islands during spring and summer, where some years up to 2000 of the birds are present. Sometimes noted in much smaller numbers at Longreef, Werribee Sewage Farm; Stingaree Bay and Swan Bay.

WOOD SANDPIPER Tringa glareola.
An uncommon bird in the Geelong District. Most of my own records come from the Werribee Sewage Farm; where from one to a dozen may be seen in spring and summer. Probably Reedy Lake and the southern shore of Lake Connewarre would also be favoured by the species.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

GREY-TAILED TATTLER   Tringa brevipes.
Mud Islands are the main spring and summer haunt of this wader in the Geelong District where up to forty can be seen at times. It is similar to the Wandering Tattler T. incanus which has not yet been reported from Victoria. All Tattlers that I have viewed closely at Mud Islands have so far proved to be T. brevipes. The Grey-tailed has a shorter nasal groove, a less distinct breeding plumage and different calls than the Wandering.

COMMON SANDPIPER   Tringa hypoleuca.
Decidedly uncommon about the Geelong area. I have seen a few at the Werribee Sewage Farm, in spring and summer, otherwise I would expect it to occur occasionally at the mouths of some streams entering the southern ocean from Anglesea to Apollo Bay and along the banks of the lower Barwon.

GREENSHANK   Tringa nebularia.
A regular spring and summer migrant in small numbers, with a few usually remaining for the winter each year. It can be readily found at Werribee Sewage Farm, Avalon and Geelong Saltworks, southern shore of Lake Connewarre to the Sheepwash, Swan Bay and Mud Islands.

MARSH SANDPIPER   Tringa stagnatilis.
Another regular spring and summer migrant in small numbers to Werribee Sewage Farm, Avalon and Geelong Saltworks and southern shores of Lake Connewarre. The Geelong Saltworks is well favoured.

TEREK SANDPIPER   Xenus cinerea.
An extreme rarity anywhere in Victoria. I have seen one at Mud Islands, two or three at Werribee Sewage Farm, and have heard of a few other records from the Geelong District.

CURLEW SANDPIPER   Erolia ferruginea.
One of the really plentiful spring and summer migrants; with a few always to be seen in winter. It can be found at practically all lakes, swamps, marshes, the two saltworks and Mud Islands.

RED-NECKED STINT   Erolia ruficollis.
I would rate this bird as the most common of the spring and summer migrants; with good numbers wintering in the district each year. Widespread in the area, it occurs in thousands particularly at the Werribee Sewage Farm, Avalon and Geelong Saltworks, southern

WADERS OF THE GEELONG DISTRICT (Cont'd.)

shore of Lake Connewarre, Swan Bay, Mud Islands, Lake Murdeduke and other Western District lakes.

LONG-TOED STINT Erolia subminuta.
One of the district rarities: this species was not recorded in the Geelong District till January 1966. Each wader season since - August to April - odd birds have been noted at the Werribee Sewage Farm. On February 6, 1966, there was one at Lake Murdeduke.

SHARP-TAILED SANDPIPER Erolia acuminata.
After the Red-necked Stint this would be the commonest of the migrant waders in spring and summer. To see a healthy one in winter is most unusual. It occurs in thousands at Werribee Sewage Farm, Avalon and Geelong Saltworks, southern shore of Lake Connewarre, Swan Bay, Lake Murdeduke and some other Western District lakes.

PECTORAL SANDPIPER Erolia melanotos.
Most likely overlooked because of its similarity to the Sharp-tailed Sandpiper: this species comes to the Werribee Sewage Farm each spring and summer. There, most seasons, it occurs sparingly with perhaps an average of about a dozen for the whole farm area each year. I have seen a few at Lake Murdeduke and one at the Geelong Saltworks, in March 1967.

KNOT Calidris canutus.
This species has its stronghold on Mud Islands during spring and summer: when up to 500 of the birds can be seen some seasons. Other places where it can be found occasionally are Longreef, Werribee Sewage Farm and Stingaree Bay.

GREAT KNOT Calidris tenuirostris.
This large Knot is rarely seen away from Mud Islands where, in spring and summer, from 100 to 250 may be present some years. Odd birds sometimes occur at Longreef, Werribee Sewage Farm.

SANDERLING Crocethia alba.
Very rare in the Geelong District: I have seen only one, at Queenscliff. There is another record from Barwon Heads.

BROAD-BILLED SANDPIPER Limicola falcinella.
Another very rare migratory wader in Victoria. My own Geelong District records are from Werribee Sewage Farm and Stingaree Bay. At the latter place I once saw about six scattered over the mudflats.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

RUFF Philomachus pugnax.
A few Ruffs are getting to Australia from time to time: I have seen two in the Geelong District. One was at Lake Murdeduke on February 12, 1966; the other at the Werribee Sewage Farm from December 15, 1968 to March 2, 1969. One or two others have been seen in the Geelong area by other observers.

AUSTRALIAN (JAPANESE) SNIPE Gallinago hardwickii.
Moderately distributed in small numbers in the Geelong District where there are grassy freshwater ponds and marshes. Sometimes the species may be found at salt marshes. Werribee Sewage Farm, Reedy Lake, the southern shore of Lake Connewarre, Belmont Common swamps are but a few places where this Snipe can be found in spring and summer.

AUSTRALIAN PAINTED SNIPE Rostratula benghalensis.
The only records for the Geelong District, of which I am aware, are given in "The Birds of the District of Geelong, Australia"; by Charles F. Belcher. "There are two in the local museum which were shot near the Lakes in January, 1892, and I have seen other specimens from the same place in private collections."

ORIENTAL PRATINCOLE Glareola pratincola.
The only Victorian records are of six together, at the Werribee Sewage Farm during December 1962 and January 1963; and a lone bird at the same place on November 21 and 22, 1964.

AUSTRALIAN PRATINCOLE Stiltia isabella.
This bird is occasionally to be seen in spring and summer about the rock-studded flat shore at the west side of Lake Murdeduke: I have personally observed one and sometimes two there since 1966. The species has also been reported from the Werribee Sewage Farm.

RED-NECKED PHALAROPE Phalaropus lobatus.
The first Australian record, a bird in breeding plumage, was noted at the Werribee Sewage Farm on December 22, 1962. Another in non-breeding plumage was seen at the same place on December 27, 1966, and again a few days later.

WILSON'S PHALAROPE Steganopus tricolor.
One bird, in non-breeding plumage, was watched for over half an hour at Lake Murdeduke on February 6, 1966. This was the first reported Australian sighting of the species.

WADERS OF THE GEELONG DISTRICT (Cont'd.)

SOUTHERN STONE-CURLEW Burhinus magnirostris.
At the turn of the century apparently a not uncommon bird in the Geelong District. A few are still to be found in the area, mainly on the Bellarine Peninsula, the few still bushy places along Grubb Road and at the You Yangs. Recent breeding has been recorded in both places.

* * * *

LAMENT OF AN AMATEUR BIRD-WATCHER

Oonah McHaffie

Oh, for a bird of a brilliant hue,
With distinct markings to give me a clue;
Not just all-over grey like a thrush,
Nor one which darts away in a rush
Ere a chance occurs to adjust the glasses
For a much better look before it passes.

Oh, for a bird with a brighter dot
On forehead, or wing, or any spot;
None of your so-called 'faintly barred',
Which to find in the book is so very hard,
But one with its colour plainly defined,
To refer to the book its easy to find.

Oh, for a bird for a while to stay still,
To give me a chance to observe it till
I can note its colour, is it yellow or buff?
Till I can make my notes in the rough;
Not one of those birds which quickly fly;
I have lost it again and I heave a sigh.

Oh, for a bird that sits out on a limb,
Not near the trunk where the light is dim;
Not one that remains behind the cover
Of leafy shade till I discover,
And my feelings thus to harrow,
Because I'm looking at a sparrow.

* * * *

PORTLAND WEEK-END EXCURSION: OCTOBER 10TH, 11TH & 12TH, 1969

Jack Wheeler

Our annual spring week-end excursion was this year taken at Portland and the large number who attended is a true indication of the popularity of these trips. In all, 91 attended, 48 being accommodated at Bay View Lodge (bed and breakfast only), 32 at Portland Motel (bed, breakfast and dinner), whilst eleven made other arrangements by camping etc. Usually we like to have all in one establishment, as we had at Marysville last year, for this makes the atmosphere so much more homely; in this case at Portland, we just had to split up, but by the number of letters and 'phone calls of thanks, the arrangements of our Portland trip went off well and did not lack enthusiasm.

The organisers were very grateful to the Portland Field Naturalists Club for providing leaders for the main excursions on the Saturday and Sunday, and for arranging the screening by the Portland Camera Club of the history of Portland to a packed audience on the Saturday evening, following which was a welcome 'cuppa'.

The very good roll-up to the pre-breakfast jaunts was also very encouraging, and all those who made the effort of rising early agreed it was well worth while.

The masses of wildflowers seen in all areas visited was very rewarding, and Mr. Errey was kept busy with identifications and queries from young and old; the task of recording the botanical side of this excursion will not be an easy one, but as usual Mr. Errey's write-up makes very good reading.

The variety of birdlife was somewhat disappointing, and our birdlist not as comprehensive as one would anticipate. Perhaps there was more emphasis on hunting wildflowers than bird-watching, but this was quite understandable when such an array of flowers was there for all to see. Mr. Trevor Pescott has written up the birdlist for this issue of our 'Geelong Naturalist'.

Personnel:
Bay View Lodge - Tony Andrews, Miss M. Arthur, Peter Bartlett, Miss M. Brownhill, Mrs. E. Buchanan, Mrs. B. Campbell, Phillip Campbell, Dr. & Mrs. P.H. Daley, Helen Daley, Mrs. W. Trenchard-Davis, Mr. & Mrs. G.N. Earp, Susan Earp, Kathryn Earp, Martin Earp, Mr. & Mrs. E.G. Errey, Miss L. Hill, Mr. & Mrs. H.E. Jennings, Wayne Jennings,

PORTLAND WEEK-END EXCURSION (Cont'd.)

Wendy Jennings, Jenny Jennings, Barbara Jennings, Billy Jennings, Vicki Jennings, Raelene Jennings, Mr. & Mrs. R. Lavery, Mr. & Mrs. G. McCarthy, Glen McCarthy, Mrs. N. McNie, Peter McNie, Miss R. Marsh, Miss M. Martin, Mr. T.W. Pescott, Mrs. F. Singleton, Mrs. O.A. Usher, Mr. & Mrs. L. Vincent, Don Vincent, Ken Vincent, Kenneth Welsh, Mrs. Daisy Wood, Mr. & Mrs. J. Whitmore.

Portland Motel - Mr. O. Andrews, Mrs. R. Andrews, Mrs. J.C. Bailey, Miss L.A. Brock, Mr. & Mrs. A.T. Buzaid, Mr. & Mrs. L. Elms, Mr. Bob Fisher, Miss M.B. Freeman, Mr. G. Gayner, Mr. & Mrs. L. Gore, Mr. A.A. Grant, Mrs. M. Green, Miss J. Hoggart, Mrs. E. Holligan, Mr. R. Martin, Mr. G. Mathison, Miss L. Ramsay, Mrs. L. Rowe, Miss J. Small, Mr. & Mrs. C.H. Smith, Miss A. Webber, Mr. & Mrs. J.R. Wheeler, Mrs. Wilkinson, Mr. L. Wilkinson, Mr. K. Wells, Mrs. Ron Wood, Mr. Ian Woodland.

Camping and other arrangements - Miss J. Banks, Miss J. Falconer, Mr. & Mrs. J. Hunt, Miss E. Poole, Miss Francie Poole, Miss Florrie Poole, Mr. & Mrs. N. Povey, Mrs. B. Quirk, Mrs. E. Yeoman.

Itinerary:
Friday 10th (evening). Meeting of Portland Field Naturalist Club. Guest Speaker, Mr. Jack Wheeler (New Guinea and Hammersley Ranges). Followed by supper.
Saturday 11th 6.30a.m. Car trip to Cape Nelson Lighthouse and walk along Scenic Road.
9.30a.m. Excursion per car to Kentbruck Heathland and Lower Glenelg National Park - Leader: Mr. Fred Davies.
8.00p.m. 'History of Portland' presented by the Portland Camera Club - screening of 2 hours. Packed audience. Followed by 'cuppa' and biscuits. Vote of thanks by Mr. Owen Andrews.
Sunday 12th 6.30a.m. Car trip to Cape Grant Quarry and wander over excellent heathland. Good views of Gannet rookery Lawrence Rocks, and distant Lady Julia Percy Island.
9.00a.m. Excursion to Mt. Richmond National Park - Leader: Mr. Noel Learmonth, assisted by Mr. Fred Davies. Later visits to the Blow Holes and lunch at Bridgewater Bay, in excellent weather conditions. From here, members after thanking leaders, went their own way. Some visited Shelly Beach, Bat Ridges Reserve, and the Portland Museum.

My personal thanks to all Committee members who assisted with the arrangements for this successful excursion, and we now look forward to 1970 and further weekenders, now so popular for this growing Club.

HIKING OVER THE HEATHLAND

SOME PLANTS OF PORTLAND

Ted Errey

The general effect of our Portland weekend from a botanical point of view was almost overwhelming. At Marysville last October we found very interesting mountain forest flora, but rather regretted a lack of variety and colour. This year the Portland district provided both in abundance.

Naturally, sandy heathland is an ideal environment for low-growing plants that flower profusely at this time of the year. We had all heard beforehand of the delightful bush country of the south-west, but none of us were prepared for the masses of colourful plants of so many varieties, making the roadside right to the wheel tracks, (and often between them), brilliant with such an array of yellows, pinks, blues, mauves and white as could not be rivalled in any man-made garden.

Amongst all this breathtaking display, three plants were outstanding. First, there was the glorious pink boronia found in abundance on the heathland on Saturday morning when we were introduced to the new Kentbruck Settlement. Evidently, to some misguided eyes, a field of clover and ryegrass is a fairer sight. Judging by the glimpse we had of some of the cattle on the pastures already established in that area, they are still sadly short of nourishment in spite of all the chemical additives that have been used on the soil.

But surely this lovely flower should never have been belittled by the unimaginative name of Hairy Boronia! It brightened the landscape not only on the higher sandy country where we first found it, but also in the swampy tracts where sections of the road brought looks of concern to the faces of our drivers. And again on Sunday morning during our early walk close to the sea, there was the same delicate pink lighting up the low shrubby herbage of the foreshore.

The hairiness of this Boronia varies, as do the physical characteristics of so many plants. The stickiness of the Varnish Wattle, for example, is found only on the young spring growth; the spikiness of the Prickly Cryptandra is usually missing; and the Snowy Mint Bush lacks the typical foliage aroma of its fellow Prostantheras. In some cases, the characteristic was evidently

SOME PLANTS OF PORTLAND (Cont'd.)

present in the type specimen first collected. In this instance plants of this Boronia species from most parts of its range are noticeably hairy. In the Portland district that is not so. A lens of ten magnifications showed the leaves to be quite smooth.

On a larger scale came the magnificent display of Grass-tree flowers as we took the new cross-country road from Mount Richmond to Cape Bridgewater. Over many acres the spikes reached up to eight feet or more, so numerous that in places we could not walk between them. Those members without cameras had more time than the rest to gaze in wonder and admiration. The photographers were quickly at work securing pictures of the overall effect, then of some of the wierdly contorted stems, and finally close-up views to preserve the detail of the flowers opening first on the northern side of the stem and gradually encircling the whole spike, each of which must carry thousands of individual flowers.

So fascinated were we that it was some time before the more observant found there were plants lesser in size but not in beauty among the Grass-trees, and several orchids were entered on our lists.

The third plant of more than usual interest was the Blue Tinsel Lily, so well named from the metallic lustre of its stiff petals. In Western Australia, where it is known as the Star of Bethlehem, it is fairly widespread in the south-western province.

In this state its main habitat is in the Grampians. Outside those ranges, scattered patches are found only in the Portland district and the Little Desert. Unfortunately the plant is not easy to propagate, nor is its rich purple-blue colouring easy to capture on film.

This is but one more instance of the urgent need to reserve for all time such localities where beautiful, unusual, and all too frequently, rare species of our flora and fauna exist. The actions of the authorities and individuals responsible for the gradual frittering away of these areas will be regarded by posterity not merely as senseless vandalism but as criminal neglect of public property.

Our first botanical studies for the weekend began before breakfast on Saturday, when President Jack Wheeler, energetic as ever, led us on a drive to Cape Nelson. The Drooping Velvet-bush soon caught the eye, for it grew there in abundance and the creamy flowers hanging

SOME PLANTS OF PORTLAND (Cont'd.)

in sprays beneath the woolly heart-shaped leaves were very attractive. This is a South Australian plant, encroaching into Victoria only as far as the Portland district.

Before we had reached our stop, a low eucalypt heavily in flower attracted attention. It was the Soap, or White Mallee, another South Australian plant extending to Portland. It is a coastal species, found on Kangaroo Island and the South Australian peninsulas. Naturally honey-eaters were busy among the dense white blossom. The seed capsules of this small tree are relatively large, measuring half an inch in diameter. Some were collected, so the tree should be gracing several Geelong gardens in a few years' time, thereby adding to the nectar supplies of our local honey-eaters.

Milkmaids and Guinea-flowers were conspicuous in ground displays, while the Small-leafed Clematis and the blue Love Creeper spread their colour among and over other plants. Not so popular was the Tangled Dodder-laurel that not only tangles one's feet but can strangle other plants with its tightly twining parasitic stems.

Green tubes of Correas were much in evidence and a few pink forms were also found. The Silky Tea-tree too, was flowering well, some plants showing the delicate pink shades often found with this species.

Here, as at most localities we visited, the Common Heath was at its best. White and red and all shades of pink in between blended with the general display.

Flame Heath and Cranberry Heath were both there, the former bright with its red tubular flowers, the latter almost finished flowering, but plenty of green berries were hiding under the stems. Several members tasted these, with no noticeable ill effects. Two Beard Heaths, the Common and the Coast species, were both in flower.

Closer to the ground were the Trailing Goodenias with flowers like bright yellow violas. Tiny Fan-flowers were there, and Violets, all pale mauve instead of the more usual purple and white. The rich blue of Tall Lobelias provided another bright spot, and the Running Postman dipped its "globules of blood among the grass's tips" wherever the taller plants gave it space.

Other pod-bearers made up a considerable proportion of the vegetation. The Coast and Myrtle Wattles had almost ended their

Hairy Boronia
White Mallee
Drooping Velvet Bush

Photos. by Trevor Pescott.

SOME PLANTS OF PORTLAND (Cont'd.)

display, but Bush Peas were in full colour. Unfortunately so many of these were new to us that without a local botanist to help, we did not try to identify the various species in the limited time available. Eight species of Bush Peas and four of Parrot Peas are listed for the Lower Glenelg National Park.

Two plants that can be included, however, are the Austral Indigo found near the Mount Richmond Lookout on Sunday morning, and the Hop Bitter Pea growing close to our lunch stop on Saturday.

The Austral Indigo is normally a straggly shrub, growing as it was there, among taller plants. The flower sprays are somewhat similar to those of the Purple Coral-pea or Sarsaparilla as it is often called. The Bitter-pea, growing in more open positions, reached six feet or more in height. A number of long branching stems from ground level formed a shapely thicket, with many yellow pea-shaped flowers. The leaves were tough and leathery, much larger than those of our other leguminous natives, and they had a very definite - and lasting - bitter taste.

The swampy section of the heathland was the home of other gems. A second boronia, evidently the Swamp Boronia, lower, trailing and less floriferous than its relative, but with flowers of the same soft pink, mingled with the taller species right to the wheel tracks. A white form of the Hairy Boronia was also found in the area.

Two more heaths, Sprengelia or Swamp Heath, so luxurious in the Grampians, and the Woolly-styled Heath, the flowers of which we had to disect before it was identified, grew there close by the road.

Mention must be made of the Melaleucas along Heath Road, especially as a most unusual hybrid is found there. An extensive belt of Mealy Honey-myrtle provides a striking mass display of purple, and in the wetter sections the yellow botttle-brushes of the Scented Paperbarks perfume the air. These two have produced a hybrid, of which only an odd plant or two are in existence. Flowers of these are an uncommon pink shade.

Orchids we found in most localities, the best finds being on our two pre-breakfast expeditions in the open heathland by the sea.

At Cape Nelson on Saturday the Bearded Greenhood was found:

SOME PLANTS OF PORTLAND (Cont'd.)

Leopard Orchids were common and so were Pink Fairies. But the most exciting find in that spot was a cluster of Daddy-long-legs, a particularly spidery-looking Spider Orchid.

On Sunday, Battery Point foreshore produced more Bearded Greenhoods, as well as Rabbit-ears and Purple Waxlips. There, too, we found fine patches of Scented Candles, and the expanding hearts of young Grass-trees revealed fascinating patterns.

Among the tall Grass-trees near Mount Richmond colonies of Hare Orchids grew, and Red-beaks were in flower where fire had swept through last summer.

The week-end left me with the feeling that if spring would but stand still while I spent a month sauntering across the heathland with lens and camera, plant list and text book, I would begin to know something of the Portland bush.

Common and Botanical Names of the Plants Discussed (in the same order as in the article).

Hairy Boronia	Boronia pilosa
Varnish Wattle	Acacia verniciflua
Prickly Cryptandra	Cryptandra tomentosa
Snowy Mint Bush	Prostanthera nivea
Austral Grass-tree	Xanthorrhoea australis
Blue Tinsel Lily	Calectasia cyanea
Drooping Velvet-bush	Lasiopetalum schulzenii
Soap Mallee (White Mallee)	Eucalyptus diversifolia
Milkmaids	Burchardia umbellata
Guinea-flowers	Hibbertia species
Small-leafed Clematis	Clematis microphylla
Love Creeper	Comesperma volubile
Tangled Dodder-laurel	Cassytha glabella
Correa	Correa reflexa
Silky Tea-tree	Leptospermum myrsinoides
Common Heath	Epacris impressa
Flame Heath	Astroloma conostephioides
Cranberry Heath	Styphelia humifusa (Astroloma humifusum)
Common Beard-heath	Leucopogon virgatus
Coast Beard-heath	" parviflorus
Trailing Goodenia	Goodenia lanata

SOME PLANTS OF PORTLAND (Cont'd.)

Fan-flowers	Scaevola species
Violets	Viola hederacea
Tall Lobelia	Lobelia gibbosa
Running Postman	Kennedya prostrata
Coast Wattle	Acacia sophorae
Myrtle Wattle	" myrtifolia
Bush Peas	Pultenea species
Parrot Peas	Dillwynia species
Austral Indigo	Indigofera australis
Hop Bitter Pea	Daviesia latifolia
Purple Coral Pea	Hardenbergia violacea
Swamp Boronia	Boronia parviflora
Swamp Heath	Sprengelia incarnata
Woolly-styled Heath	Epacris lanuginosa
Mealy Honey-myrtle	Melaleuca squamea
Scented Paper-bark	" squarrosa
Bearded Greenhood	Pterostylis barbata
Leopard Orchid	Diuris maculata
Pink Fairies	Caladenia latifolia
Daddy-long-legs	" filamentosa
Rabbit-ears	Thelymitra antennifera
Purple Waxlip	Glossodia major
Scented Candles	Stackhousia monogyna
Hare Orchid	Caladenia menziesii
Red-beaks	Lyperanthus nigricans

* * * * *

Subscriptions are now well overdue, and any still outstanding should be forwarded without delay to -

Hon. Treasurer,
Mr. E.G. Errey,
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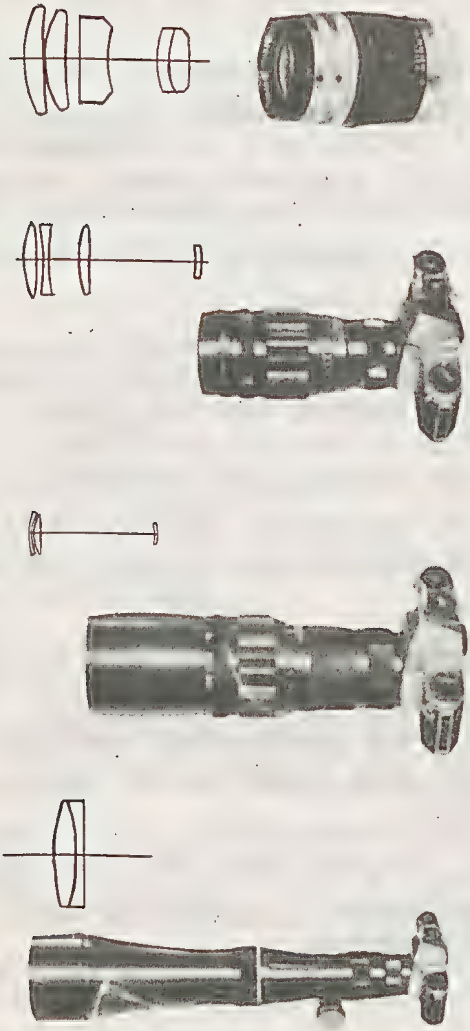
* * * * *



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BIRDS AT PORTLAND

Trevor Pescott

(Compiled from lists by Jack Wheeler, Geoff Gayner and Trevor Pescott - October 11th and 12th, 1969.)

Introduction: During the weekend of the Club's Portland visit, we were able to sample three main habitat types, notably the ocean coasts, heathland and adjacent forest particularly at Kentbruck and Mt. Richmond, and the open grassland with scattered swamps, marshes and waterholes; all areas visited were quite close to Portland.

Comments on the flora of these areas are recorded elsewhere in this issue of "Geelong Naturalist".

Because of the rather tight itinerary, no great amount of time was given to detailed bird observing, but 83 species of birds were seen in the course of two days. Most of the species seen are birds found around Geelong, with the exception of the Emu which has become extinct in our district, and the Black-winged currawong.

Other interesting observations were the Gannets on Lawrence Rocks, the large number of Little wattlebirds seen at Cape Nelson, and the sighting of a Southern skua.

Species seen: The following bird species were listed -

Emu (Dromaius novae-hollandiae) Apart from the family of chicks killed on the road near the Inkpot, and the one survivor featured in the photograph, another chick in the same vicinity, and adults were seen at Mt. Richmond National Park.

Common bronzewing (Phaps chalcoptera) Two were seen near Cape Nelson.

Short-tailed shearwater (Puffinus tenuirostris) Several hundreds offshore from the Blowholes and fewer elsewhere.

Albatross species One bird seen, but it was too far offshore for positive identification.

Black cormarant (Phalacrocorax carbo) One at the Blowhole.

Black-faced cormarant (Phalacrocorax fuscescens) Several perched on rocks off Dutton beach.

Australian gannet (Sula serrator) A few were seen flying offshore. It was possible to see the nesting colony of gannets on Lawrence

BIRDS AT PORTLAND (Cont'd.)

Rocks, and although they appeared just as a white smudge, there are in fact several hundred pairs, nesting in a closely-knit group.

Crested tern (Sterna bergii) Two at Bridgewater Bay.

Silver gull (Larus novae-hollandiae) Common near the coast.

Southern skua (Catharacta skua lonnbergi) One close inshore at Cape Grant.

Spur-winged plover (Lobibyx novae-hollandiae) Common throughout.

White ibis (Threskiornis molucca) A few seen around swampy areas.

Straw-necked ibis (Threskiornis spinicollis) Several seen.

White-faced heron (Ardea novae-hollandiae) Quite common.

White egret (Egretta alba) One at Nelson, fishing in the shallows of the river.

Royal spoonbill (Phatalea regia) One feeding in a swamp on the outskirts of Portland.

Eastern swamphen (Porphyrio melanotus) Several noted at a swamp just out of town.

Black swan (Cygnus atratus) A few seen on the local swamps; one family of cygnets was seen.

Black duck (Anus superciliosa) Three at Cape Grant.

Musk duck (Bizura lobata) Several on a swamp near Nelson.

Swamp harrier (Circus approximans) A few only were seen.

Wedge-tailed eagle (Aquila audax) Several birds seen at Mt. Richmond and over the Kentbruck forest.

Brown goshawk (Accipiter fasciatus) One noted in the timbered area close to Mt. Richmond.

Whistling eagle(kite) (Haliastur sphenurus) One over Mt. Richmond.

Brown hawk (Falco berigora) Several seen on the margins of Mt. Richmond.

Nankeen kestrel (Falco cenchroides) Several close to Portland.

BIRDS AT PORTLAND (Cont'd.)

Yellow-tailed black-cockatoo (Calyptorhynchus funcreus) Occasionally seen, particularly in the vicinity of pine plantations where they feed on the pine-cones.

Gang-gang cockatoo (Callocephalon fimbriatum) Several seen in the bushland areas, feeding on the seeds of eucalypt species.

White cockatoo (Kakatoe galerita) Quite common.

Galah (Kakatoe roseicapilla) Several recorded.

Crimson rosella (Platycercus elegans) Common in the forested areas.

Blue-winged parrot (Neophema chrysostoma) Common in the areas near Nelson.

Kookaburra (Dacelo gigas) Frequently seen. One bird observed to be carrying a small bird in its beak, presumably as food.

Pallid cuckoo (Cuculus pallidus) Calling in several localities.

Fan-tailed cuckoo (Cacomantis pyrrhophanus) Two seen and heard at Bats Ridges.

Horsfield bronze-cuckoo (Chalcites basalis) Heard and seen at Kentbruck.

Golden bronze-cuckoo (Chalcites plagosus) Heard calling at Kentbruck.

Fairy martin (Hylochelidon ariel) Several nesting colonies at road-culverts under the Princes Highway near Portland

Welcome swallow (Hirundo neoxena) Common in most areas visited and around the town.

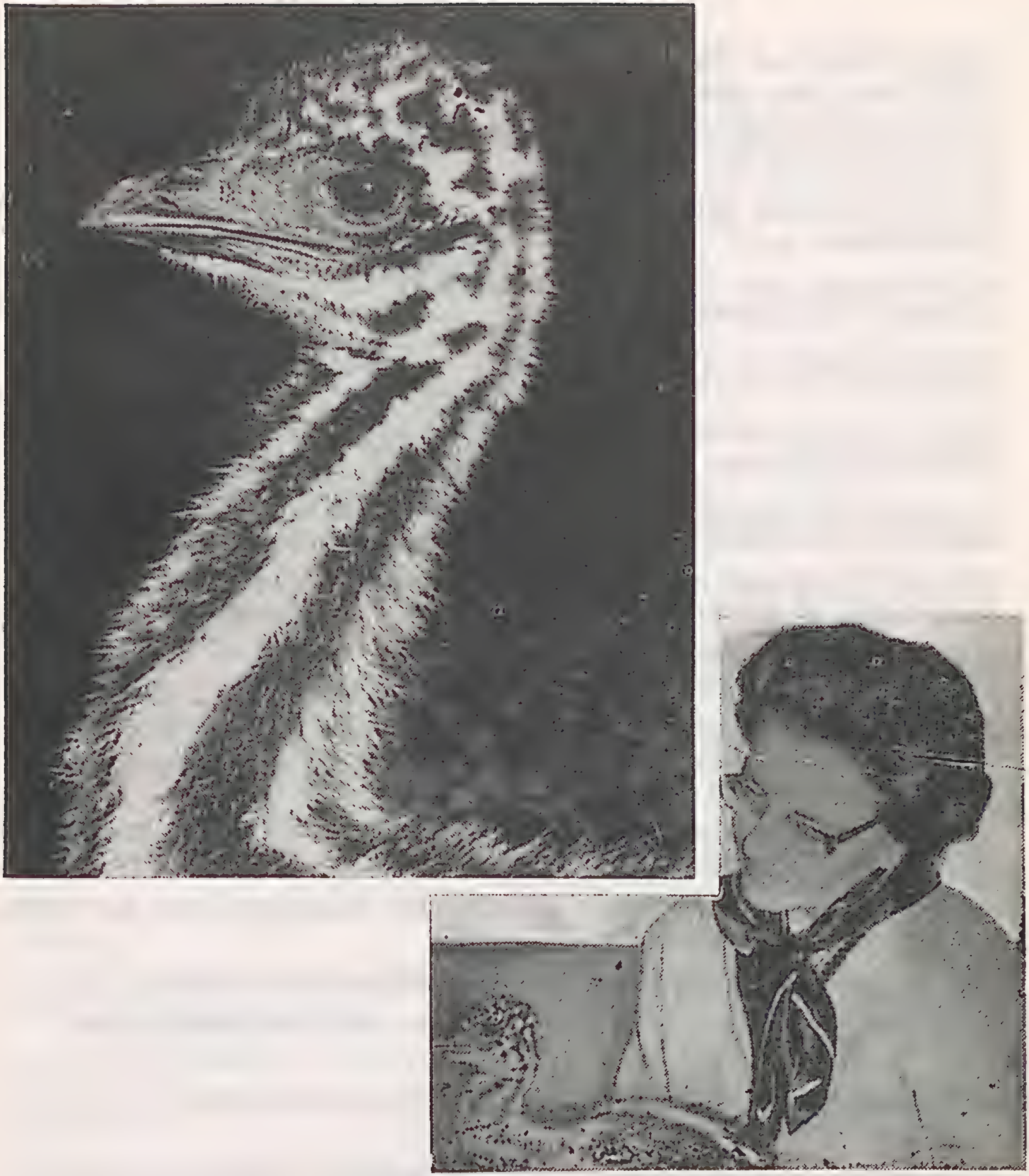
Grey fantail ((Rhipidura fuliginosa) Seen in all timbered areas; common.

Willy wagtail (Rhipidura leucophrys) Several seen near farms.

Yellow robin (Eopsaltria australis) Quite common at Kentbruck and Mt. Richmond.

Scarlet robin (Petroica multicolor) One pair only seen, that being at Mt. Richmond.

Grey thrush (Colluricincla harmonica) Common, particularly in the timbered country.



Emu Chick

Mrs. L. Rowe with "Julia"

Photos. by Trevor Pescott

BIRDS AT PORTLAND (Cont'd.)

Mudlark (Grallina cyanoleuca) Common in the open land particularly where there were dams or waterholes.

Black-faced cuckoo-shrike (Coracina novae-hollandiae) Several seen at Kentbruck and Mt. Richmond.

Blackbird (Turdus merula) Common around the town and in the adjacent coastal areas.

White-fronted chat (Epthianura albifrons) Small groups recorded at Kentbruck and Cape Nelson.

Striated thornbill (Acanthiza lineata) A small flock seen near Moleside.

Brown thornbill (Acanthiza pusilla) In bushland areas generally, several birds seen.

Yellow-tailed thornbill (Acanthiza chrysorrhoa) Frequently seen in most areas visited.

Striated field-wren (Calamanthus fuliginosus) A few only were seen, these being at Kentbruck and near Nelson.

Little grassbird (Megalurus gramineus) Heard calling in rushes beside a swamp near Nelson.

Rufous bristlebird (Dasyornis broadbenti) Although one bird was flushed from scrub near Bridgewater, none were calling; however near Nelson, several birds were heard on a few occasions.

Golden-headed fantailed-warbler (Cisticola exilis) In rushes and rank grass in swampy country near Nelson.

Southern emu-wren (Stipiturus malachurus) Several calling in heathy country near Kentbruck; one bird seen.

Blue wren (Malurus cyaneus) Common throughout the district.

White-winged triller (Lalage suerii) One male bird noted at Mt. Richmond National Park.

Dusky wood-swallow (Artamus cyanopterus) Recorded from Kentbruck and Mt. Richmond.

White-browed scrub-wren (Serecornis frontalis) A few only were seen in rank growth near the swamp at Nelson.

BIRDS AT PORTLAND (Cont'd.)

White-throated tree-creeper (Climacteris leucophaca) Several seen at Kentbruck and Mt. Richmond.

Orange-winged sittella (Neositta chrysoptera) A small flock seen in the Kentbruck forest.

Spotted pardalote (Pardalotus punctatus) Heard calling at Kentbruck.

Eastern striated pardalote (Pardalotus ornatus) Noted in several of the bushland areas visited.

Silvereye (Zosterops lateralis) Very common particularly in the coastal scrubs and heaths.

Brown-headed honeyeater (Melithreptus brevirostris) Several at Kentbruck.

Singing honeyeater (Meliphaga virescens) A few seen in the coastal areas notably Bridgewater.

White-eared honeyeater (Meliphaga leucotis) Common in the bushland and heaths.

Crescent honeyeater (Phylidonyris pyrrhoptera) A few only were seen at Kentbruck.

Yellow-faced honeyeater (Meliphaga chrysops) Heard and seen along the river at Moleside.

Yellow-winged honeyeater (Meliornis novae-hollandiae) A very common bird in most areas, particularly at Cape Nelson.

Little wattlebird (Anthrochaera chrysoptera) Large numbers seen feeding in the flowering mallee gums at Cape Nelson.

Pipit (Anthus australis) Several seen in the heathlands and open country.

Skylark (Alanda arvensis) Common, particularly in the coastal grasslands at Bridgewater.

Greenfinch ((Chloris chloris) Common at township.

Goldfinch (Carduelis carduelis) Common in open areas and around Portland.

House sparrow (Passer domesticus) Very common.

Starling (Sturnus vulgarus) Very common, nesting at the Motel.

BIRDS AT PORTLAND (Cont'd.)

Raven (Corvus coronoides) Common throughout the district.

Pied currawong (Strepera graculina) Quite common in the bushland at Kentbruck.

Black-winged currawong (Strepera melanoptera) Several seen in the coastal areas and at Gorae West.

White-backed magpie (Gymnorhina hypoleuca) Common, many young birds seen.

* * * * *

SEABIRDS AND WATER

"The albatross and other tube nosed birds drink sea-water with impunity because their nostrils contain special glands which extract from the blood all superfluous salts and let them drip away in mucus to the outside world."

In an article by Lorus and Margery Milne - "Animals" Magazine
Vol.4 page 524.

* * * * *

PHOTOGRAPHS WANTED

Black-and-white photographs, printed on glossy paper, are needed for use in future issues of 'Geelong Naturalist'. Any subject of natural history interest will be of use, and it is hoped to keep a wide variety of prints available to supplement articles submitted without illustration.

Please contact Hon.Editor,
Trevor Pescott,
4 Victoria Terrace,
Belmont, 3216.

AT RANDOM

FINDING A STRANGE HARE - by Ted Errey.

Amongst a list of about twenty orchids found in a small section of bushland in the Bellbrae district during October, five Caladenias were included. Most numerous were the Hare Orchids, Caladenia menziesii, found in colonies that must often have numbered hundreds.

The area was one that had been swept by fire last summer, which would account for the number of flowers of this species and also of Red Beaks, Lyperanthus nigricans.

Of special interest was a small colony of several dozen Hare Orchids with flowers different from the normal type. They were first found and brought to my notice by Mrs. H. Kroger, of Belmont, whose family has done some enthusiastic orchid hunting in the Anglesea district this spring.

The variation was not only one of colour, which is not unusual among some orchid species. In this small colony every flower varied from normal in the shape and size of the dorsal sepal. In the Hare Orchid, this forms a small hood over the column, between the erect lateral petals, which are the hare's "ears".

With the freak specimens, however, the flowers extended their hoods till in some cases they stood up almost like a third ear in between the other two. The taller the hood, the more slender was its form. Many were growing distortedly sideways, some even leaning across one of the ears.

Specimens were shown to Mr. Jim Willis and Mr. Ted Rotherham, two of the authors of the recently published book "Flowers and Plants of Victoria", during their recent visit to Anglesea. Neither had previously seen such freakish variations in the species.

THE TREES OF MUIR WOODS

H.A. & M. Boardman

We have always been interested in the Redwoods of California, and last May we spent two days at San Francisco to give us the opportunit of seeing the trees in Muir Woods.

This is a National Monument, established in 1908, and has an area of 500 acres. It is 17 miles north of San Francisco and is a wonderful example of the foresight of one man, William Kent who purchased the last virgin stand of redwoods near San Francisco and gave it to the Government for all to enjoy, and named it "Muir Woods" in honour of John Muir, a noted wirter and naturalist who lived from 1838 until 1914.

Redwood were once scattered all over the world, but could not survive the glacial ice of the ice age. Today the only place in the world that redwoods grow naturally is in a narrow belt 30 miles wide and 540 miles long, along the Pacific Coast from Monterey to the south west corner of Oregon. In Northern California, two redwoods are 367 feet, but in Muir Woods some reach 240 feet, so, though beautifully straight, and very tall, are not to be compared in height to the others.

In the redwood forest, family circles are formed by redwood trees maturing from root sprouts and are quite common in the forests. 98% of natural reproduction is from sprouting, only about 2% start from seeds. They are very fire resistant as they have a large amount of water in their wood, almost no inflammable pitch and a very thick asbestos-like bark. The moist ground where they usually grow also reduces the possibility of fire.

Insects and fungi do not injure many trees because of certain chemicals in the bark and wood. The result of the deep shade and few insects is that there are less birds and animals, the latter because of few light-loving plants. There are lovely ferns such as sword-ferns, lady ferns and even bracken.

The giant salamander and the mole and black-tailed deer are found, and the winter wren can be seen occasionally.

In the wood was a cut section of redwood, 1021 years old, 6 feet in diameter. Another one 20 feet in diameter was only 1000 years old, so growth depends on temperature, moisture, sunlight and competition from other plants.

(Footnote - figures quoted are from U.S. Dept. of Interior information)

JUNIOR PAGES

In the last issue of "Geelong Naturalist", four photographs were printed and Juniors were asked if they could identify the subjects in the photographs; this was not very easy, for they were as follows: top left - Spider orchids, top right - Goshawk, lower left - Grasstrees, lower right - Huntsman spider.

Let us look more closely, not at the photographs, but at the subjects shown, for each one is found locally, and should be familiar to you.

Spider Orchids: These little plants are quite common in our bushland areas, particularly at Anglesea and Steiglitz; we even found a few at Batesford on our excursion there last month.

They grow from a bulb or tuber which stays in the ground, sending up a leaf shoot and a flower shoot at the time of the year most suited to them - this is usually in the spring time.

The flowers, although quite small, are very colourful and the strange shapes of the different types of Spider orchid make them most interesting.

Those in the photograph are known as "Fringed Spider-orchids" or as "Green-combed Spider-orchids", because of the green, fringed edge to the tongue.

They are called Spider-orchids because their long sepals look rather like spider legs.

Brown Goshawk: One of several common species of hawks found around Geelong, the Goshawk is found in bushland rather than the open farm lands. The You Yangs is an excellent place to search for the Goshawk, for many pairs are found to nest there; they are quite plentiful at Anglesea, too, and at Anakie and the bushland near Ocean Grove.

The Goshawk builds a solid nest of sticks, often quite high in the fork of a gum tree, and it uses fresh gum leaves as the lining; there are up to 5 eggs laid, these being white.

JUNIOR PAGES (Cont'd.)

Young Goshawks are covered with thick, creamy-grey down to keep them warm, and their parents feed them on rabbits, birds and other small animals.

Goshawks will attack anyone who interferes with their nest, and there is at least one bird photographer who had his camera broken when it was struck by a Goshawk defending its nest.

Grasstrees: These are also known as Kangaroo-tails because of the long flower-spike, or Blackboys because their trunks are quite black, particularly if they have been in a bush fire some years before.

They flower much better after a bush fire than otherwise, but the ones in the photograph at Ocean Grove have never been burnt; so their dry leaves hang down to completely cover the trunk.

The long flower-spike will grow many feet tall and contains thousands of separate flowers; one botanist has told us that a spike 10 feet tall would have about 5,000 flowers!

In the trunks of the Grasstree is a large amount of sticky resin, and this comes out if the plant is burnt; in some places, Grasstrees are cut down and burnt just to obtain this resin, which is then used in certain kinds of paint.

Huntsman Spider: This large spider gets its name because it does not spin a web to trap insects, but hunts them from under loose bark and amongst rocks.

Other names used for the spider are Tarantula or Triantelope, but both of these are wrong; the real Tarantula is found in the tropical jungles of islands in the Pacific and other Oceans. It is a very poisonous spider.

Our Huntsman is completely harmless to human beings, and even if it does bite, it will not harm us.

The one in the photograph has its legs around an egg-sac; this is like a cocoon, made of closely spun web-silk, and in it are laid about 50 or more eggs.

These hatch out as little spiders just like the adults, but of course, much smaller; once out of the egg-sac, they can look after themselves without help from the parents.

* * * *

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CRESTED TERNS

Hon. Editor: Trevor Pescott

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The Statements and the opinions contained in the papers published in this Journal are the responsibility of the respective authors.

MEMBERSHIP

Membership of the G.F.N.C. is open to any person interested in Natural History. The 'Geelong Naturalist' is distributed free to all members, and the Club's reference and lending library is available.

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COVER PHOTOGRAPH:

Crested Terns
By Trevor Pescott

GEELONG NATURALIST

Vol.6. No.4.

EDITORIAL

February, 1970.

The Otway Ranges is generally accepted as including all the densely wooded area from near Lorne to Horden Vale; but the precise boundaries of the Otways seem rather indefinite, and could well include all the bushland and elevated country from Torquay to near Warrnambool, from the basalt plains south of Colac and Camperdown to the coast.

If we do include all this area in the Otways, as we probably should, then there is nearly 900,000 acres, or 1500 square miles, involved.

Within this area, we have only several small forest reserves and the coastal National Park near Port Campbell - a few thousand acres at most, consisting perhaps 0.3 per cent of the total.

Because of this lack of permanent reserves in the Otways, it is excellent news indeed to hear that the Anglesea-Airey's Inlet Society (Angair) has taken the initiative, and approached the State Government with a recommendation that a large Park be established between, and north of, these two towns.

Our worry now, of course, is what attitude will be taken by our State Government in respect of such an ambitious request - only time will tell!

It should be a basic aim of this Club, and of each of its members, to work towards having a far greater proportion of the Otways reserved - not only as National Parks, but in the various types of Reserves best suited to preserve the flora and the fauna in each of the various habitats concerned.

There are many types of forest land still in the Otways, and there are some land tracts still virtually unscarred; one such area, that between the Kaangalang and Thompson Tracks, east of Forrest, would make an excellent Wildlife Reserve.

TREVOR PESCOTT,

Hon. Editor.

NOTES FROM "THE GEELONG NATURALIST" PUBLISHED BETWEEN 1902 AND 1913

By Trevor Pescott

Some time ago, I was loaned some issues of "The Geelong Naturalist" from Mr. W. Renton of Newtown; the following are just a few notes of particular interest, to which I have appended comments applicable today, about 60 years after the original observations were recorded.

Vol.5. No.4. Dec. 1902.
"Another significant alteration to the (Game) Act concerns imported birds. Formerly all birds not indigenous to Australia, except Sparrows and (Indian) Mynas, were protected throughout the year. For the future only the English Thrush and Skylark and the Java dove, are to enjoy this immunity."

> Apparently until 1902, even the Blackbird and Starling were protected; both birds are now serious pests. One wonders if all these species had not been introduced, would the native species have thrived - we will never know!

Second Series; Vol.1. No.3. Sept. 1903.
Page 51. (At the You Yangs) - "Now that the timber has been given a chance to grow, the reserve at the You Yangs is becoming very rich in bird life, as was once no doubt the whole of our district. On a recent visit (Aug. 21st.) we noticed .... Temporal Pomatostomus .... breeding".

> The Pomatostomus or Babbler is now probably extinct throughout Geelong, once being common; the last nest was possibly one I found on Wooloomanata in 1954.

Second Series; Vol.2. No.3. March 1906.
Page 152. Club outing to Dog Rocks on 13.11.05.
"Botany - plants in bloom

Ranunculus lappaceus
Hibbertia stricta
Drosera auriculata
Hymenanthera Banksii
Viola hederacca
Viola betonicifolia
Comesperma calymega
Hypericum japonicum
Stackhousia linarifolia
Oxalis corniculatum
Geranium pilosum
Erodium cygnorum
Pultenaea stricta
Dilwynnia cricifolia
Bossiaea prostrata
Kennedya prostrata
Glycine latrobeana
Pimelea humilis

NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

Acaena ovina
Acaena sanguisorbae
Tillaea verticillaris
Tillaea imexantha
Leptosperm lanigerum
Epilobium glabellum
Haloragis fetragyna
Daucus brachiatus
Brachycome diversifolia
Leptorrhynchos squamatus
Stuartina Muelleri
Erechfites quadridentata
Lobelia prafioides
Brunonia australis
Solanum nigrum
Convolvolus erubescens
Cynoglossum suaveoleus
Prostanthera nivea
Veronica gracilis
Diuris longifolia
Caledenia carnea
Glossodia major
Hypoxis glabella
Wurmbea divica
Burchardia umbellatum
Bulbine bulbosa
Chamaescilla corymbosa
Arthropodium strictum
Arthropodium pauiculatum
Luzula campestris
Juncus communis
Anthristina ciliata
Stipa aristiglumis
Agrostis solandri
Poa caespitosa
Danthonia pencillata
Cymbonatus lawsoniarius
Helipterum dimorpholepis
Gnaphalium japonicum
Craspedia Richea
Wahlembergia gracilis

Three species of ferns were also recorded. Of mosses 8 species and of Hepatics one were collected."

For a comparison, see the G.F.N.C. publication titled An Introduction to Batesford Sanctuary "Lilydale House" (June 1967).

"Mr. A.B.F. Wilson obtained several species of lizards and also the pretty two-hooded snake Furina bicucullata."

This may have been the Common Brown Snake formerly known as Furina textilis; the juvenile with several dark bands across its head and neck may have mistakenly been called a separate species. Failing this, I can not find any reference to the species mentioned, although the genus was formerly accepted for several species.

"The most important find of the day, however, was an old aboriginal workshop ....

"This outcrop (of Gabro) was first discovered by Mr. A.B.F. Wilson. The only other outcrops to be found in the district are at

NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

Bannockburn and Ceres."

> The value of this stone is indicated by the following extract from "Men of Yesterday" by Magaret Kiddle (Melb. Uni. Press 1961. Page 8) "There were at least eight tribes in the Western District which roamed their own territories unless summoned by message stick or smoke signal to attend one of the inter-tribal gatherings. These were held in the summer. One meeting place of the inland tribes was at the large marsh Mirraewuae, celebrated for emus and other game, almost within sight of Mount Rouse; another was at Mount Noorat. At both there were hunting, feasting and tribal dances, or corroborees. There was also barter, or the ceremonial exchange of goods. The tribes found it necessary to supplement their local resources with those from other districts. Some parts of the country produced special materials coveted by tribes which lived elsewhere. Obsidian, or volcanic glass, used for scraping and polishing weapons was found in the region of Dunkeld; forest kangaroos, from whose skins the finest rugs were made, lived chiefly around Mount Noorat. From the Geelong district came the best stone for making axes, and a kind of wattle gum celebrated for its adhesiveness. Sea shells, red clay, special woods for spear-making, stones for axes, gum to fix axe-handles - these and other materials were exchanged.."

Second Series; Vol.2. No.4. June 1906.
Page 194 - report of an excursion to Paper Mills area, when 130 plant species were found.

Second Series; Vol.3. No.3. April 1907.
Page 50. Mud Island by A.G. Campbell, Melbourne.
"The laying season (of Storm Petrels) is from middle to end of November." And the plants - "On the south-western edge of the Island, where the sea sand drifts up with every gale, will be found Calocephalus brownii, Scirpus nodosus, Poa billardieri and Distichlis maritima, with solitary plants of Capile maritima. On the north

NOTES FROM "THE GEELONG NATURALIST" (Cont'd.)

western edge where the sand has blown into a hummock perhaps ten feet high is a clump of Myoporum insulare, Acacia longifolia, Aster axillaris and some magnificent large and rounded shrubs of Styphelia richei.

On the protected and older sandbanks, where the Storm petrels nest, are fields of Tetragonia implexicoma crawling over the sand, or brakes of Antriplex cinereum standing five feet high. Scattered about are tussocks of grass, and rambling bushes of Atriplex palludosum and Phagodia billardieri and Cheropodivae sp. The introduced plants, Carduus lanceolatus, Urtica urens and Anologis arvensis will also be seen.

"It has been said that Mud Island is one of the oldest parts of Port Phillip, in fact that before the Sorrento dunes and peninsular were formed, Mud Island existed."

(These notes referred to a trip to Mud Island 28/12/1906)

Much of the vegetation has altered in the last 63 years, with some species including Ac. longifolia being lost.

Regarding the age of the Islands - recent investigations suggest that the formation is new, being only about 3,500 years.

* * * * *

OTWAYS SURVEY STARTED

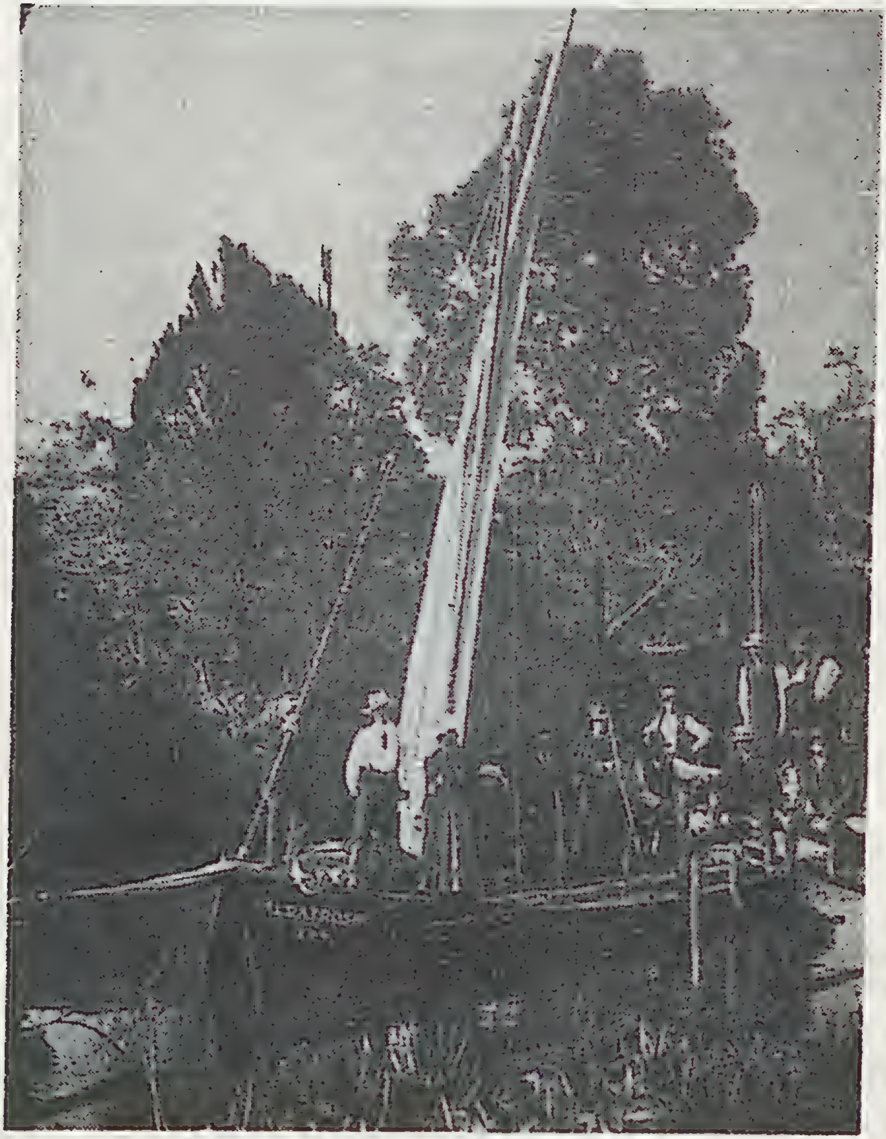
By Trevor Pescott

A Survey to attempt to find out a great deal more about the Otway Ranges was launched at a weekend camp at the Parker River last December.

It is hoped to carry out camps each second month, the next being this month (February) and following that, one at Easter.

Both of these camps will be along the Parker River.

A full report of these camps will be published in "Geelong Naturalist" later this year.



Wilsons Promontory Party 1905

Photo by Mr. Macy.

WILSON'S PROMONTORY

By Mrs. V. McHaffie

Members may be interested in this photograph taken at the time of the Field Naturalists' Club excursion to Wilson's Promontory in 1905.

In view of all the controversy in recent years as to whether there should be a licenced Motel and whether there should be more facilities for tourists and subsequently more and more traffic, which without doubt will be detrimental to the fauna in the area, it is interesting to note the way the party reached the locality almost sixty-four years ago.

An article in "The Victorian Naturalist" Vol.XXll No.12, April, 1906, reporting on the excursion, gives a very detailed description of the Promontory at that time and discusses suggestions and plans for its preservation. After the first few pages, which are under the heading "General", sections are devoted to "General Zoology (except Mollusca)" by J.A. Kershaw, F.E.S., which includes a section "Birds" by Mrs. Hardy, "Conchology" by G.B. Pritchard, F.G.S., "Botany" by A.D. Hardy, F.L.S., "Geological Notes" by G.B. Pritchard, F.G.S., "Ethnology" by A.S. Kenyon, C.E.

Perhaps if I quote a small section from "General" by A.D. Hardy, F.L.S., it will give some idea of the excursion.

"There is no settlement on the Promontory excepting the lighthouse quarters at the south-eastern corner, and around a sawmill, which is cutting into the fine gullies on the eastern side at Sealers' Cove; the township site of Seaforth, excluded from the Park, surveyed at the northern end of the Promontory, never having been utilized.

"The only good track in the reserve at present is that of the Post and Telegraph Department. This connects Foster by way of the isthmus with the lighthouse, passing through Yanakie, across the Darby River, over timbered hills and heathy sand dunes, across the Tidal River and morass, over the Oberon ridge by the easterly of the two "bad saddles", skirting the summit of Mt. Oberon on the way, then hugging the low saddle to the east of the Oberon-Norgate Valley, and escaping the morass except a portion which is "logged", it ascends a ridge near Martin's Hill, and descends on the southern side to cross Roaring Meg Creek and trend south-easterly to South-east Point.

"Along this route are at least two suitable camping grounds. One is on the south bank of the Darby River, reached by crossing the river

WILSON'S PROMONTORY (Cont'd.)

by the footbridge, and dropping down behind the sand hummocks, where the telegraph line repairers' hut is enclosed in a small horse paddock. The other is behind the sand hummocks of Oberon Bay, on Fraser's Creek. At both places good water and grass for pack horses is plentiful. Other camping grounds exist, but for want of cut tracks are not accessible. Such are the mountain-locked enclosures at Sealers' Cove, Refuge Cove &c., which can be reached more conveniently by boat from Welshpool or Port Albert, but are otherwise isolated from the rest of the Park.

"Our party commenced the journey from Foster, on the South-Eastern railway line, distant 107 miles from Melbourne, where supplies of fresh bread and meat were obtained, and sent by pack horse via the Yanakie isthmus. We walked to "Foster Landing" on Stockyard Creek, a distance of about two and a half miles. This landing was once of greater importance than at present, the railway extension to Welshpool and Port Albert having left it in the lurch. There we boarded Mr. Taylor's well-equipped yacht 'Albatross', and passed between the mangrove-covered mud banks out into Corner Basin, where we crossed, and cast anchor at the unimproved "landing", as near the dry land as the gradually sloping mud flat would allow. By wading we removed our baggage, &c., to a place of safety, and were soon joined by Mr. W. Barker, who, with his assistant, Mr. Bena Claverino, brought our five pack horses round from Foster via Yanakie. Crossing a low sandhill, vegetated with eucalyptus, honeysuckle, grass-tree, &c., at the foot of the Vereker Range, we struck across the open heathy country and swamp lands to the telegraph line track, and by this continued southerly, up and down sand hummocks - vegetated in places, while to others the fine sand drifting before the wind gave the appearance of smoking volcanoes - to the Darby River Camp. Owing to the courtesy of the Post and Telegraph Department, we were enabled to use the repairers' hut as a store-house for provisions, and pitch our tents in the fenced grassy enclosure on the river bank. Having explored the Darby River flats, the sand hummocks, and the coast of this part, we moved southerly across the timbered hills, heathy undulations, and Tidal River swamp to the Mt. Oberon Ridge. The main party crossed this ridge by what is known as the "Bad Saddle" and had a steep climb before the beauty of Oberon Bay lay spread beneath them to the south. Meanwhile the botanical members had spent much time about the Tidal River and swamp, and had climbed round the

WILSON'S PROMONTORY (Cont'd.)

summit of Mt. Oberon on a saddle on the eastern side, and descended into the valley about the head of Growler's Creek. Notwithstanding the simple "lay of the country", the obstacles to progress presented by jungles and swamps were of too formidable a nature to be overcome, and a detour by the south too long. They slept on the mountain side, and rejoined the main party in camp at Oberon Bay, after having been without food for nearly twenty-four hours, though with many additions to the plant collection. At the Oberon Bay camp much energy was displayed by the photographers, who climbed the surrounding bouldered hills to obtain views. After examining the shoreward end of this wide valley, we crossed the Promontory to Waterloo Bay, examining as we went the grassy sand dunes, which extend far inland, and crossing the low saddle which bridges the valley from Mt. Wilson Range to Martin's Hill. The trip from Oberon Bay camp to Waterloo Bay and return can be done in a day, and pack horses can, but with some difficulty in absence of a cut track, be got over most of the marshy ground on the east side to within a mile of the shore.

"Long before the collectors and photographers were satisfied, our time limit had expired, and we returned via the Darby River to the landing at South Corner by almost the same route, but by small deviations examining fresh country. There the 'Albatross' lay heeled over in the mud, to be righted by the incoming tide, which done, we waded to her, and with a favourable wind were at Foster Landing in less than three hours.

"Our work occupied eight days, and our tracks totalled altogether some fifty miles. The expenses of the trip were by economy kept within an average of £4.10s. per member, which is about 10s. more than that for a similar term in the Otway the previous Christmas, but taking into consideration the difficulties in the way of provisioning and transport the expenses may be considered as very moderate. The original arrangement of 10 lbs. per member for personal effects outside blankets, &c., was abandoned for what amounted to much the same thing, 30 lbs, including everything but tents and provisions, and this was found to be ample. The whole of our tents, provisions, collecting apparatus, bedding, &c., carried by the five pack horses, reached nearly half a ton."

THE PHOTOGRAPH

(See p.102) Particulars on the back of the photograph read:

The Field Naturalists' Club Excursion to Wilson's Promontory, via

WILSON'S PROMONTORY (Cont'd.)

Foster, Corner Inlet, and Yanakie, under the leadership of A.D. Hardy - December, 1905.

Two weeks, 6 tents, 5 pack horses.
Two camps, Darby River, Fraser's Creek.

Geology	Dr. Hall
Zoology	J.A. Kershaw, F.E.S.
Anthropology	A.S. Kenyon, C.E.
Mineralogy	Dr. Pritchard
Photography	Mr. Macy, Mr. Armitage
Botany	A.D. Hardy
Ornithology	Mrs. A.D. Hardy

"Leaving Foster Landing for the journey across the Inlet.

"From Foster the party crossed Corner Inlet in the sailing boat 'Albatross'.

"In the picture Mrs. Hardy is standing opposite the furled sail on mast, with alpenstock in hand. A.D. Hardy in shirt sleeves facing camera."

(Actually, the latter appears to me to be an error. I think A.D. Hardy is seated, second from right, coat on, panama hat.)

Photograph by Mr. Macy.

EDITOR'S NOTE:
It may be of interest to members to know that a daughter of Mr. and Mrs. A.D. Hardy (Mrs. G.F. Higgins of Highton) is a member of the Geelong Field Naturalists' Club, as is the present writer, Mrs. V. McHaffie.

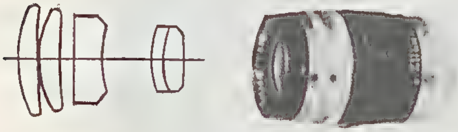
* *

AT RIGHT:

Mrs. Hardy examining wildflower, Wilsons Promontory.

Photo by A.D. Hardy.

PHOTOGRAPHERS!



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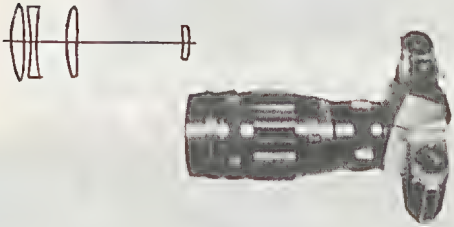

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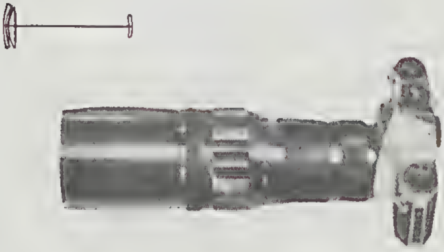

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135 mm, 200 mm, 300 mm, 500 mm

BROKEN HILL AND THE BARRIER RANGES

By Adrian Davey

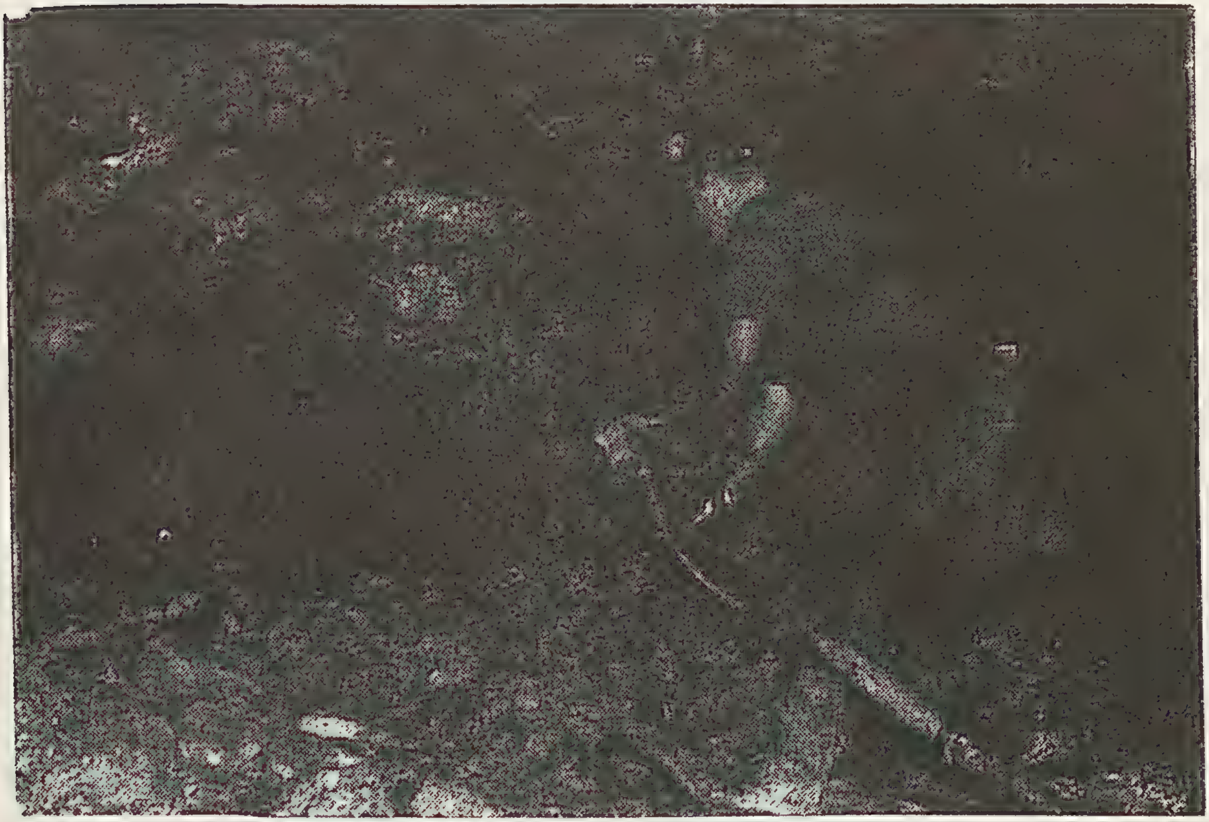
Australia's outback presents many unusual and unique sights to the traveller,but one of the most incongruous and unexpected is to drive out of the Thackaringa hills in the Barrier Ranges, and from the top of a hill, be confronted with Broken Hill spread out in the distance. Unlike most towns, Broken Hill exists only for the wealth beneath its streets, and from many miles away the shaft headframes and residues dumps of the mines are a distinguishing feature rising out of the drab saltbush.

The town originated from the finding of silver and lead by boundary rider Charles Rasp on a black outcropping hill in 1883. Then followed a saga of Australia's history that is best described in Geoffrey Blainey's "The Rise Of Broken Hill" if the reader wishes to pursue the romantic history of the area. As a result of the silver boom of the 1880's the Barrier Ranges today are everywhere pockmarked with the evidence of man's subterranean quest for shining wealth.

In contrast to the roaring 80's the Barrier Ranges are now quiet and the only centre of mining is the town of 30,000 that is Broken Hill. Four companies remain to mine the lode that has already produced over 100 million tons of ore worth about $400 million in silver, lead, and zinc. The town is literally an oasis in the desert. Good amenities and social services are provided for the townspeople. The Flying Doctor Service operates a base there and the town now has an assured water supply from Menindie on the Darling to the south-east. Cost of living is slightly higher than the capital cities but higher wages and the lead bonus more than compensate. Broken Hill is a hardworking, dusty, rough outback town in many respects, and it boasts 30 hotels and another dozen licenced clubs. Industrial disputes have played a key role in the development of the mines and town, and the Unions have very effective control over many aspects of life there.

The Barrier Ranges themselves are old and eroded. The rainfall in the area ranges from 8 to 11 inches annually and the vegetation is dull, sparse and stunted. Trees are generally scattered and gnarled Buloke, Mulga or Mallee. The ground cover consists mainly of saltbush, bluebush, some spinifex, and various other woody and often prickly plants. Emus and Kangaroos are the only common forms of wildlife apart from birds, mainly because the whole area is grazed

A view of North Broken Hill Ltd. Mine Complex.



Underground drilling in preparation for blasting.

Photos by A. Davey.

BROKEN HILL AND THE BARRIER RANGES (Cont'd.)

and indeed the pastoral industry (sheep) is the only other industry apart from mining. At Mootwingee, some 60 miles north of Broken Hill on the Tibooburra Road, there are some excellent Aboriginal rock paintings, and at numerous places throughout the ranges artifacts of various kinds have been found.

Every day, beneath the streets of Broken Hill, thousands of tons of ore are drilled and blasted. The minerals present vary along the two miles or so length of the lode, but are mainly Galena (lead), Sphalerite and Marmatite (zinc), with significant concentrations of silver, with minor gold, antimony and cadmium. The ore is scraped or loaded with big end-loaders into chutes or railway trucks and either gravitates or is hauled underground by train to the shaft. The broken ore is transferred to the surface in huge buckets called "skips" and then goes through the crushers and ball mills to the flotation cells where the valuable minerals are collected and the waste removed for return underground. Each day long train-loads of lead or zinc concentrates leave the town for Port Pirie in South Australia, where the concentrates are smelted. Some of the zinc concentrate is shipped to Risdon in Tasmania for treatment.

The future of the town is assured for many years to come, because many millions of tons of profitable ore remain in the famous boomerang-shaped lode. The richest ore was close to the surface and was mined out early in the town's history, but the ore persists to depths of 4,000 feet and more. There are few ore bodies in Australia that can equal the "Fabulous Hill" in the variety of minerals to be found in the mines. Although the basic feedstock of the treatment plants consists mainly of the sulphide minerals of lead and zinc, almost all metallic minerals are present including copper, uranium, manganese, tungsten, bismuth and a vast number of non-metallic minerals. Broken Hill has been, and still is, a paradise for the geologist and collector of minerals.

The broken hill that has, by the whim of nature, become a big town, has plenty of life in it yet and will continue to produce vast amounts of wealth both monetary and scientific.

* * * * *

WING-CLAW OF WATER BIRDS

By Ellen M. McCulloch, Mitcham

One of the characteristics of the family Rallidae, which contains the Coots, Rails and Moorhens is the small horny spur or "claw" on the end of the first digit of the wing (Hans Hvass "Birds of the World" 1969 Methuen, London). This spur does not protrude forward as does the spur on the Spur-winged Plover Lobibyx novae-hollandiae, but points backward along the wing. In Australian species it is present in both downy young and adults of the Coot Fulica atra, Dusky Moorhen Gallinula tenebrosa, Eastern Swamphen Porphyrio melanotus and others.

Arthur Cleveland Bent's "Life History of North American Marsh Birds" (1963 re-print Dover Publications New York) re Gallinula chloropus states p.351 "There is a sharp spur at the bend of the wing, which the young bird uses to assist it in climbing among the reeds and lily pads."

"Birds of the British Isles and their Eggs" T.A. Coward, 1969 Frederick Warne & Co. Ltd. London-New York states p.111-112 (re Moorhen G. chloropus) "On the bastard wing is a distinct rail or claw, which, like that of the Hoatzin of South America, is used in climbing. Coward saw a tiny bird scramble into the nest, using its wings as hands, and C.B. Moffat watched a nestling climb from the water up a steep bank 3 or 4 feet high, clutching the herbage with its wing-claw."

There do not appear to be records of the use of this claw in Australia species, and published field observations relating to it would be most interesting, and valuable for comparison with related species.

* * * * *

"THE BIRD BATH" - A SEQUEL

By Oonah McHaffie, Park Orchards

My article "The Bird Bath" appeared in the Journal of April, 1968, but had been written some time before the drought brought many more birds regularly to the bath.

In my previous comments I mentioned a group of birds not yet identified as they were casual visitors and were unknown to me. During the drought they became regular visitors to the bath and I was able to identify them as the Brown-headed Honeyeaters. They are more quaint than attractive with their over-all brown appearance with darker brown head, the most distinguishing feature being the narrow buff crescent round nape of neck and extending to the orbital band which is also light coloured. There is some olive-green on the back, mostly observed when the birds are hovering.

These Brown-headed Honeyeaters always arrived at the bird-bath in a group of at least six, often nearer to a dozen, heralding their approach with a series of chirping sounds. They would perch on the rim while drinking or between quick dips and then would perch in the nearby Cootamundra Wattle to preen themselves. Their perching and preening habits seem to be unlike any other birds we have observed. They would sit in groups ranging from perhaps four in one to six in another, as tightly packed together as possible, and would preen themselves while in this close proximity. It seemed quite a feat.

The bird-bath was the first attraction to bring them to our property but we are pleased to find that this spring they are visiting our native plants, the most popular being the grevilleas, and Kennedya rubicundra which they seem to enjoy particularly. Our Kunzea baxteri flowered for the first time this year and, as the lovely bright red brushes are on the ends of the branches, it was a delight to watch the birds swaying on the flowers while feeding on the nectar.

Other birds which we had not seen before the drought and which came to the bird-bath were the Spotted Pardalote and the White-naped Honeyeater. The latter came sometimes singly but more often in a party, sometimes mixed with a party of Brown-headed Honeyeaters. On one notable occasion the bath was overcrowded with six or more Brown-headed Honeyeaters and about the same number of White-naped Honeyeaters. It was impossible to get an accurate count as they

"THE BIRD BATH" - A SEQUEL (Cont'd.)

moved around jostling for a position on the edge and waiting for a turn to plunge into the water.

Last summer was the first time that we had noticed Grey-backed Silvereyes using the bath. The previous summer, when there were no water restrictions, they came to enjoy the spray from a hose but we did not notice them using the bath. It was also the first time that the Yellow-faced Honeyeater stayed around during the summer and autumn. The bird-bath was the attraction. Previously we had only observed this bird while the Grevillea juniperina was in flower in spring and early summer.

The shortage of water drove some of the larger birds to using the bath. We are not very pleased about this as we wanted to encourage the smaller birds and one Magpie, or even a Grey Shrike-Thrush, having a sit-in bath used up all available space. It also caused more work in keeping the bath filled because of displacement caused by the larger birds.

Fortunately, the sparrows patronised the cats' water dish, nearer the house, and the mynas and blackbirds did not trouble us, as they apparently used the troughs kept filled for the cow and the two ponies. As we have masses of these introduced species around, the bird-bath would soon have been depleted of water if they had taken to using it.

During this summer we had many opportunities to observe the bathing habits which seem to vary considerably from one species to another. The small Thornbills would perch on the rim between dips, fluff themselves out and do most of their preening there. They appear to be able to sense or smell the presence of fresh water from some distance. Sometimes not a bird would be in sight but, as soon as we had filled the dish with fresh water, we only had to withdraw some little way off and wait a short time and the Thornbills would arrive and perch on the rim. The Grey Fantail would also spend sometime on the bath. Being a very friendly bird he particularly enjoyed mixed bathing, especially with the Thornbills. The Willie Wagtail, on the other hand, would spend a considerable time on the bath but was so busy warning all other birds to keep away that he did not enjoy the pleasures of the bath. The Honeyeaters, White-eared, White-plumed, and Yellow-faced, were nervous when bathing and drinking. After a moment or two they would be away to the safety of

"THE BIRD BATH" - A SEQUEL (Cont'd.)

a tree. But the funniest to watch was the Eastern Spinebill. He would fly from the nearby Cootamundra Wattle, in for a quick dip, return to the shelter of the tree, and back again to the bath, without any time for preening. One day we watched one particular bird and he had fifteen dips before we lost count. A pleasing sight one day was two Scarlet Robins, which we thought were immature males, thoroughly enjoying themselves in the water and splashing it over the sides.

The complete list of birds which we noticed regularly on the bath between the beginning of January and the end of March, 1968, is:

Fantails - Grey, Willie Wagtail.
Honeyeaters- Brown-headed, Eastern Spinebill, White-eared, White-naped, White-plumed, Yellow-faced.
Magpie - White-backed (one or two occasionally).
Pardalote - Spotted (occasionally).
Thrush - Grey-Shrike (occasionally).
Thornbills - Brown, Little, Striated.

* * * * *

COLORFUL TELEPHONE DIRECTORIES

By Trevor Pescott

The P.M.G. have again this year decorated the covers of their district telephone directories with color photographs of local fauna, this year using mammals and lizards. (Last year it was birds, and we hope future years may bring forth other series of nature photographs.)

For Geelong, we have the Tiger Cat; Colac to Portland and Edenhope has the Barred Bandicoot; Bairnsdale to Sale and Mornington has Leadbeaters Possum; Wangaratta - Myrtleford has the Feathertail Glider; the district around Seymour has Echidnas, Mildura the Thick-tailed Gecko, and Ballarat to Nhill district has the Bearded Dragon.

Congratulations, P.M.G.

THE A1 GOLD MINE

By A.G. Davey

Suddenly the noise of the battery died and the air was still. An era of Australia's history had come to an end at the flick of a switch. Never again would the valley echo to the roar of Australia's last company owned stamper battery, for the A1 Consolidated N.L. Gold Mine near Gaffney's Creek closed down in September 1968. The A1, Victoria's last mountain gold mine was in the rugged ranges south of Mansfield, just seven or eight miles north of Woods Point.

The mine was discovered in 1863 by a bearded Irish prospector wandering through from the newly discovered gold at Stringer's Creek and Woods Point. At first the reefs were worked by open cut as well as underground, and today huge mullock heaps lie below a gaping scar in the hillside up above the mine. By the late 1870's the A1 had a stamper battery erected and operating, and was surrounded by other mines - the South A1 mine, the Rose of Denmark Mine, the Dempsey mine and several others. Work ceased in the open cut around the turn of the century and it was at about that time that the present main shaft was commenced. During the early days of the mine, and especially the thirties, the upper levels of the mine were honeycombed with workings, and it was not until later years that the mine reached depths greater than a thousand feet. In 1948 the Company struck the Victory Lode that was to produce some phenomenal yields. Assays of 7 ozs. to the ton were common, and the average was 5 ozs. In a time of frozen share prices, the company paid dividends greater than the market value of the shares during this period. Over the years the company has paid over $2 million in dividends. The mine closed down just recently because the ore it was treating was an unprofitable 7 dwt. to the ton - less than half an ounce. When the mine closed it was employing only 18 men, about ten of them underground. At the time of the Victory Lode there were seventy five men underground. In recent years, the battery, which was replaced in the early 50's was treating about three hundred tons a fortnight for a return of one hundred ounces of gold. At present value this production was worth about $7,500 a month while production costs have risen to $10,500 a month, largely as a result of high labour costs. The mine would need to be treating ore assaying one ounce to the ton to have profitably continued operation.

The gold-bearing quartz reef occurs in a dyke of dionite running roughly N-S and about five hundred feet wide, on slate country rock.

The Battery House, Power House, Workshops and Crusher.

Inside the Battery House

Photos by A. Davey.

THE A1 GOLD MINE (Cont'd.)

There is a tendency for the gold to be associated with the reefs on the "hanging" wall of the dyke, that is, on the top slope rather than the bottom of the dyke, and hence most of the workings are on one side of the dyke. Unlike many mines, the A1 had no headframe. An adit, or tunnel, ran straight into the hill for nearly a quarter of a mile until it intersected the dyke, and the shaft goes down from this point. The winder that operates the cage is situated in an underground chamber sixty feet above the adit level. From the adit the shaft goes down about half a mile, with twenty one levels off it - like twenty one floors in a building - at intervals of about one hundred feet.

On a particular level, a "plat", or large underground chamber is blasted out close to the shaft, and then drives are put in to intersect the reefs. Diamond drilling is used to direct the development of mining into new areas, and to determine the existence of gold in a particular reef. The reef itself, if payable, was completely blasted and dug out and the ore trucked along the drive on a railed mine trolley, or dumped down a chute for collection on the next level, a hundred feet or so below. Unlike the oldtimers, the miners of recent years had a much easier time. The miners of a century ago drilled blast holes with a hammer and a steel which was turned by hand between blows. Today the miner can drill many more holes in much less time with pneumatic drills and carbide drill bits. Even so, the humble miner's pick still plays an important part in getting the ore out. When the ore is taken to the shaft it is hoisted to the adit level and taken out to the surface in dump cars hauled by a tiny electric locomotive.

At the surface, the ore is dumped into bins and gravitates to the primary crushers before going into the battery bins. The battery itself consists of five metal rods, each weighing several hundredweight and tipped with hard steel shoes, in a steel box not unlike a piano in shape. The stampers move up and down and pulverise the ore between the stamper and the bottom of the battery box. The fine ore passes through a screen and over amalgam plates where most of the gold is retained, and then passes over several concentrating tables. The tailings are discharged into the creek and the concentrates are later cyanided. Power for the underground workings and for the battery and mine buildings has been supplied by the S.E.C. for several years now, but was originally produced in the Company's

THE A1 GOLD MINE (Cont'd.)

own diesel powerhouse. This powerhouse, with its generators and compressors is still part of the mine buildings. Because the country near the mine is so rugged, and the nearby hills so steep, the mine buildings, including the battery house of several hundred feet in length down the hill, are clustered close together, and the houses and tiny Post Office are grouped together along the creek. The settlement will soon die. The machinery and mine buildings, sold by auction, will be taken away for scrap, or left to rust as passing reminders of a mining era. The miners have left for other jobs, or gone to other mines in the fast expanding areas of Western Australia and Tasmania. For the first time in many years, the valley is quiet.

* * * * *

KNOCK, KNOCK, WHO'S THERE?

By Trevor Pescott

One evening some time ago, I heard a rather urgent noise at the front door of our home in Belmont.

I investigated, to find who was trying to enter - and found to my complete surprise, a Ring-tailed Possum, clutching frantically to the door frame just at face height, having been disturbed by our little Silky Terrier as it crossed our front garden.

I often wonder what would have happened if the Possum had called the terrier's bluff.

* * * * *

HATTAH NIGHTS

By Trevor Pescott, Belmont.

At the end of October and the first days of November several years ago, I spent five days at a hut in the Mallee in company with three other Geelong naturalists, and a bird photographer from Melbourne Mr. L. O'Connor.

Mr. O'Connor knows the Hattah area of the Mallee extremely well, having spent many weeks there over the last 10 years. He and other Melbourne bird observers, and members of the Ouyen Field Naturalists Club had built a hut near Lake Hattah some years ago. When the National Park was declared, the hut had to be removed, and a site behind the railway station was chosen.

Mr. C. Tingate, well known to Geelong naturalists assisted by Hattah naturalist Mr. Ben Eggleton, finished rebuilding the hut (it was framed up earlier in the year) and had made it ready for habitation by the end of October.

About this time, we joined Mr. Tingate for what was virtually a long weekend.

The first day after we arrived (we reached Hattah at 2.30a.m. after a long night drive of 300 miles) was hot and humid, and we spent the time familiarising ourselves with the sights and sounds of the Mallee.

After our evening meal, we spoke of some of the rareities of the district, and Mr. O'Connor told of such creatures as Coral Snakes, Numbats, Mitchell's Hopping Mice, and Mitchell's Short-tailed Snake.

Our conversation grew more general, to the common Geckoes that lived under loose bark, and Blind snakes which burrow in the ground. Mr. O'Connor remarked - "Some years ago, I chanced to walk along a track at night, and caught a Blind snake as it crossed the track - they're nocturnal you know." (Yes, we did).

It was a warm humid night, so the inevitable remark came - "Let's get some fresh air - this hut's too hot!" It was too early for bed, anyway, and too hot to sleep.

Mr. O'Connor and I, at least, thought this, so we left the others at the hut and wandered down the track south of the hut, enjoying the fresh air and the "feel" of the Mallee - something one has to experience to understand.

HATTAH NIGHTS (Cont'd.)

Within 200 yards, we found the first Blind Snake, wriggling casually across the red, Mallee sand track; I picked it up, and found it difficult to hold - it was about 10 inches long, worm thin and eel slippery. Un-worm-like was the strength of its body however, and it proved extremely unwilling to enter the matchbox which we intended to be its temporary home.

Another hundred yards further on, we found a Gecko - a beautiful, grey, tree-dweller called the Marbled Gecko.

Within another 50 yards was a second lizard, this time a beautiful, pink species called the Beaded Gecko. Unlike the Marbled which has suction pads on the feet indicating a tree-dwelling habit, this one had straight clawed toes suggesting its terrestrial nature.

We returned to camp well pleased with our haul, and sparked off an enthusiasm which stayed with us throughout our camp, a keenness to learn more of the reptiles and other rarely seen fauna.

The second night again proved warm and humid, but with the prospect of thunderstorms; almost as soon as we left the hut, the glow of lightning low in the southern sky heralded the change which came late in the night.

This time, Mr. O'Connor and I were joined by Mr. Eric Bound and Mr. Geoff Gayner, and the additional lights and eyes produced an increased catch. Three species of Geckoes, including 8 individuals, and several Blind Snakes of two species were found within a few hundred yards.

Unfortunately, the weather turned cold after that evening, so on the remaining nights we did not bother searching, as we knew there would be too little activity to warrant the additional lack of sleep.

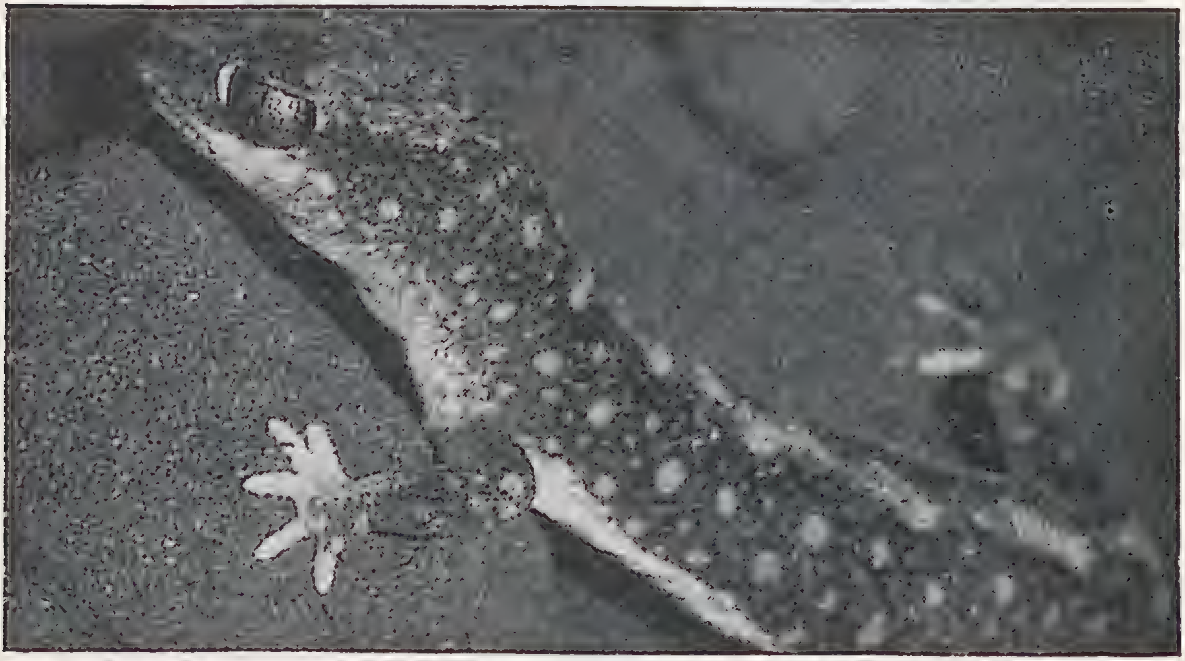
This all goes to prove, I think, the worth of a night-time bush ramble, for so much of our native fauna is nocturnal.

Footnote:

The five reptile species recorded were -

Beaded Gecko	Lucasius damaeus
Marbled Gecko	Phyllo dactylus marmoratus
Thick-tailed Gecko	Gymnodactylus milii
Blind snake	Typhlops nigrescens
Blind snake	Typhlops sp.

Typhlops the Worm-snake.



Beaded Gecko

Photos by Trevor Pescott.

HATTAH NIGHTS (Cont'd.)

I rather prefer the term "Worm Snake", for although they do have only rudimentary eyes, their general appearance and burrowing habits are distinctly worm-like. They are, of course, completely harmless to anything larger than termites which are a favourite food.

* * * * *

VALE EDWARD TAYLOR

Although unable to take an active interest in Club activities in recent years, we remember Edward John Ramsay Taylor as a member of our first committee; he was elected to his position on the committee at the inaugural meeting of the Club, on April 11th 1961, and served for two years before retiring through a serious illness that curbed an extremely active life.

Born at Talbot in Victoria, Mr. Taylor rose to become one of Victoria's leading hospital administrators; he joined the staff of the Geelong Hospital in 1933, and after several years, was appointed to the administrative staff of the Warracknabeal Hospital, and later to the Melbourne Hospital.

He returned to the Geelong Hospital staff in 1949, where he remained as its chief administrative officer until 1964 when he resigned due to ill-health.

Although unable to participate in any of the wide variety of interests he undertook prior to the long illness which resulted in his death on February 11th this year, he will be remembered as a keen and perceptive man in many activities throughout Geelong.

Our sympathy is extended to his widow, their son and daughter.

T.P.

* * * *

AT RANDOM

FLY AGARIC AT DURDIDWARRAH - by Trevor Pescott.

On December 7th., 1969, several members of the G.F.N.C. were engaged in the "challenge" Bird Count, a day devoted to the search for birds in selected areas over the Central Victorian Region.

Although birds had occupied our thoughts more intently than had any other aspect of natural history, it is quite impossible to completely exclude all other animals and plants from a naturalist's mind, so as we walked through our prescribed areas, ears and eyes straining to hear or see every bird present, subconsciously mental note is made of other features.

My team of observers had moved into a pine plantation at Durdidwarrah in the hope of finding the roost of the Powerful Owls which frequent this area; the best way to do this is to look for the casts and droppings of the birds, so we moved along the rows of pines, eyes downcast, searching for the tell-tale pellets of undigestable fur and bone that the birds regurgitate.

There, on a mat of pine needles, we found something completely unconnected with Powerful Owls but almost synonymous with pine plantations - a crop of Fly Agaric fungi (Amanita muscaria).

The toadstools were beauties, fully 6 inches across, but rather faded red than the bright hue we usually expect.

I can not recall seeing them in this plantation before, nor have I heard of them appearing in early summer rather than autumn when we usually look for them.

WEASEL SKINK, ALIAS "BANANA SKINK" - by Trevor Pescott.

There is a little skink lizard known amongst local schoolboys as the Banana Skink; this name is apparently purely local, yet I have heard it used on several different occasions.

AT RANDOM (Cont'd.)

My first introduction to this species was one which Patrick Ward had caught for inclusion in his collection of local reptiles, a collection which ultimately won for him an award in the 1969 Science Quest.

Neither Patrick nor I know the species at all, and after the Quest but before we could have the lizard identified at the Museum in Melbourne, it came to an end in the jaws of a large Cunningham Skink left to share its quarters.

Eventually a name was located, quite endemic apparently and a vernacular not recognised in reference books - the Banana Skink.

As this was being investigated, assistance came quite independently and unsolicited.

Another Club member told me of a lizard he knew only as Banana Skink - did I know it? The query came from Kees Koppelaar who has been as active collecting lizards in Corio as Patrick has been in West Geelong.

Quite independently of each other, two groups of schoolboys had used the name Banana Skink, suggesting it is quite widely used in this district.

It was Kees who had the matter resolved, for he had a specimen identified at the National Museum, Melbourne, as the Weasel Skink, Leiolopisma mustelinum.

DOMINICAN GULLS - by Trevor Pescott.

Two of these birds have been seen on several occasions over the last month (January) at Mud Islands.

Known also as Kelp Gulls, they are rare in this part of Australia.

* * * *

SIR CHARLES BELCHER - A TRIBUTE

To naturalists in Geelong, no better known name than Belcher exists, and this came about by young Charles Belcher's interest in birds long before the turn of the century. Born at Geelong in 1876, and educated at Geelong Grammar School, Charles Belcher roamed the Geelong district at every opportunity in search of birds, and his splendid book "The Birds of the District of Geelong, Australia", published in 1914, is so full of information that this book is much prized by naturalists even today.

Charles Belcher was an athletic type, and his feats of walking to the You Yangs or to Cuthbertson's at Ocean Grove in a day were well known, so keen was he in searching out birds of interest.

To further his education, he went to Melbourne University to later return to Geelong and become a partner of the firm of Birdsey and Belcher, solicitors in Malop Street.

However, in the years that followed, most of his life was spent overseas. He went to London in his early twenties, and was married in London in 1908, having met his wife Sara at a social of the English Speaking Union. They had three children.

In the legal world he held many high positions and they included - Assistant Judge, Zanzibar; Acting Puisne Judge, Kenya; Member of the Appeals Court, East Africa; Attorney-General, Nyasaland; Judge of the High Court, Nyasaland; Chief Justice of the Supreme Court of Cypress; Chief Justice Trinidad and Tobago, and President of the West India Appeal Court. He was knighted in 1931.

In 1930, Sir Charles Belcher published another book, this time on "Nyasaland Birds". In 1964, Sir Charles planned to return to Australia to meet old friends and relatives, but ill-health intervened and prevented this. This was a great disappointment, not only to himself, but to us who had corresponded with him, but had never had the opportunity of meeting him. Until the time of his death, Sir Charles Belcher was the only surviving foundation member of the Bird Observers Club.

Mr. George Belcher, owner of Lilydale House Sanctuary at Batesford is a nephew. During recent years, Sir Charles regularly received our Geelong Naturalist, and took a great interest in our activities.

We mourn the loss of this wonderful man, and we extend our sympathies to surviving relatives.

J.R.W.

JUNIOR PAGES

Each year, in November, the Geelong Field Naturalists Club accepts entries in a project for junior members and groups; generally, we start to talk about the projects, and remind juniors, during the middle of the year, and often this is too late to prepare a project properly.

So, to help you remember the Project Competition, the Junior Pages in this issue of "Geelong Naturalist" lists some suggestions which you may find useful, and some hints on what the Judges will look for.

The Competition this year will be in three sections -

(1) individual members
(2) groups of members e.g. School nature clubs, or groups of friends
(3) scout, guide or similar group.

In each section, one prize will be awarded for the best project in that section.

Where necessary, several special prizes will be awarded, too, especially where young members compete with older ones and where the groups in section (2) and (3) are very different.

The prize will be a book and certificate.

Many of our entries in previous years have been in the form of project books, with a series of coloured pictures of birds, plants or animals drawn by the junior; some of these are really excellent.

Only a few, however, show that an attempt has been made to do some real observing, and this is a pity; after all, we are a Field Naturalists Club, and our aims are to interest people in birds, plants, animals, and other things found out-of-doors.

Some other suggestions for your projects are to make collections, say of stones or shells, insects or bark of trees, gum-tree seed-boxes or even leaves; pressed flowers are more difficult for

JUNIOR PAGES (Cont'd.)

most are protected and a permit must be obtained from the Forests Commission before they can be collected.

Birds nests and eggs are protected and can not be touched or collected - but why not look through some magazines and copy pictures of the nests and eggs you may see? Or make careful notes about the nests?

Another idea could be to make up a large sheet of paper, color it so that a map is made - blue for water, yellow for sand, green trees, brown for paddocks and so on - and draw on this where different birds may nest.

Always remember to write down where you see the nest, the type of tree if possible, how high the nest is from the ground, and the date you found it.

Another idea is to keep a diary - for a certain time, say a month, and write in it what birds (or plants, or insects) you see each day.

Three things will be looked for by the Judges -

(1) original observations, notes written about what you have personally seen.
(2) neatness in the way you set out your entry.
(3) a different type of project, showing that you have thought out something yourself.

Lastly, the senior members have all had some experience in these projects, and their advice will be useful; ask what they suggest if you can not think of something yourself. Also, they may be able to identify any plant or bird you do not know.

Let us have this the best year yet, and give your Judges some really good entries from which to find the winners.

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MISTLETOES

On the next page are some photographs of three stages in the growth of the Mistletoe. Do you know what each one means?

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